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Master Thesis

"The Pink Tax: Marketing Strategy or Gender Discrimination? Comparing Female and Male Consumers' Price and Packaging Preferences"

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INTRODUCTION

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In their day-to-day lives, women are confronted with several forms of economic and social inequalities. The gender wage gap is the most obvious disparity existing between men and women. As a fact, women worldwide generally earn less than men (World Economic Forum, 2019). This inconsistency has long been blamed on women's supposed lack of education and professional experience compared to men (Green & Ferber, 2005). Yet, this difference remains unexplained in many ways and is considered as a form of gender discrimination (Grybaitė, 2006; World Economic Forum, 2019).

Curiously, women are also constrained to pay more than men for what seem to be identical products and services. This specific phenomenon is known as the pink tax (Yazicioglu, 2018). This notion, which relates to the colour of products and packaging marketed to women, describes a form of price discrimination based on gender marketing (Duesterhaus, Grauerholz, Weichsel, & Guittar, 2011). The pink tax refers to the fact that in financial terms, women pay a higher price than men for identical products or services (New York City Department of Consumer Affairs [DCA], 2015; Yazicioglu, 2018). Studies reveal that products designed for female consumers cost approximately 7.0% to 13.0% more than similar products designed for male consumers (Duesterhaus et al., 2011; DCA, 2015). As a consequence, women are found to pay on average USD 1,400 more than men per year for similar products ("The Woman Tax", 2012).

The debate over this price disparity has been widely investigated. A number of studies consider the pink tax as a simple marketing strategy (Carpenter, Glazer, & Nakamoto, 1994; Mitchell & Walsh, 2004; Ferrell, Kapelianis, Ferrell, & Rowland, 2018). In that sense, the forenamed researchers align on the theory that the pink tax is a form of price discrimination based on the value consumers assign to a given product or service. Ferrell et al. (2018) argue that female consumers are often willing to pay more, and thus, it justifies the existence of a segmentation of the market between female and male consumers. Likewise, Carpenter et al. (1994) claim that the product differentiation between both segments in terms of communication, attributes and packaging leads to a price discrimination. More recent evidence (DCA, 2015; Dholakia, 2019) finally suggests that women are under no obligation to buy female gendered products. If female consumers do not want to be charged a higher price, they have the choice to purchase a male or a

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neutral gendered alternative instead. However, this so-called "gender-based versioning" is not possible for services such as dry cleaning and hairdressing, which are widely known for applying the pink tax (Belleflamme, 2015; DCA, 2015).

According to Dholakia (2019), the pink tax raises an ethical issue. He considers the main argument in favour of this strategy to be unfounded. Based on a thought experiment, Dholakia (2019) speculates that the market might reflect the opposite phenomenon: male gendered products might be more costly in production and male consumers might be willing to pay more than female consumers. Dholakia (2019) concludes by questioning the value attributed to product features and packaging. Consistent with Belleflamme (2015), both authors raise uncertainty about the willingness for female consumers to buy more expensive female gendered products and the lack of neutral gendered options in the store. Additionally, consumers are not in a position to influence the packaging or the components of the products offered to them in the marketplace (Duesterhaus et al., 2011; DCA, 2015). Mitchell and Walsh (2004) further highlight the importance of gendered packaging. The researchers found that communication and product claims intended for the opposite gender, for instance "For men", prevent consumers who do not consider themselves as belonging to that gender from purchasing these products. Moreover, female and male products are often presented on separate shelves in the store (Dholakia, 2019). This separation clearly reinforces the market segmentation between female and male consumers and differentiated consumption by gender (Duesterhaus et al., 2011). In short, the pink tax is a chicken and egg paradox.

Although many scholars have taken an interest in the subject, there is still considerable controversy surrounding the pink tax. This paper furthers a deeper understanding of the pink tax and the perception of gendered packaging and price discrimination on the market today. The aim of this research is to verify whether previous findings and statements suggesting that the pink tax is a simple marketing strategy are confirmed, or whether it raises more ethical problems such as gender discrimination. This study begins by giving an overview of the different literature existing in this field. The problem statement and hypotheses are discussed in the next section. The third section describes the methodology applied to measure preferences for female and male consumers regarding price and packaging of personal care products. The following section examines descriptives and reliability of the data. Results and discussions are presented in the fifth section, while the final section draws some conclusions and provides opportunities for future research.

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1 LITERATURE REVIEW

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1.1   Background: The Pink Tax

Initially named the woman tax, the pink tax refers to the price difference between female and male products and services. The notion, which arises from the colour of the packaging of products generally marketed to female consumers, appears in the early 1990s in the United States (New York City Department of Consumer Affairs [DCA], 1992). The pink tax is characterised as a form of price discrimination based on gender marketing and stereotypes (Yazicioglu, 2018). In simple terms, it constrains women to pay a higher price for similar products that would cost less for men.

This disproportionate gap was first identified by an investigation conducted in the city of New York by the DCA (1992). The groundbreaking study revealed that women are charged a higher price than men for dry cleaning, laundering, hairdressing and car purchasing. The paper blames the implementation of this practice on the lack of information to female consumers about these price disparities. Yet, with more information available today, it still remains difficult to raise awareness among consumers (DCA, 2015; Ferrell et al., 2018; Jacobsen, 2018). Another study conducted by Forbes Magazine in the United States revealed that for similar products or services, such as deodorant or a haircut, women pay nearly USD 1,400 more than men per year ("The Woman Tax", 2012).

The pink tax applies to a wide range of products and services. The most recent study, conducted in the city of New York by the DCA (2015), reports that on average female gendered products are 7.0% more expensive than male gendered alternatives. Through a comparison across five industries, namely toys, clothing, personal care products, and health care products, the research reports that 42.0% of the products marketed to female consumers are more expensive than identical products marketed to male consumers. Along these lines, 18.0% of the male gendered products are more expensive, while the same price stands for both genders in 40.0% of the cases. These results indicate that female consumers are charged a higher price than male consumers for nearly half of all investigated products. Despite the fact that the individual price differentiation on a product is generally considered as low, the study claims that this price disparity follows a woman throughout her entire lifetime, from baby products to products for elderly consumers.

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1.2 Gender-based Marketing and Communication

McDermott and Hatemi (2011) define gender as a social concept in which a great number of behavioural and attitudinal codes are established and further categorised in two main groups: men and women. In contrast, the authors suggest that a person's sex defines whether his or her genitals are male or female. Although gender identity can be constructed separately from one's biological reproductive organs, women born with female genitals generally refer to female gender norms, while men born with male genitals mostly refer to male gender norms (Bristor & Fischer, 1993; McDermott & Hatemi, 2011; Batalha & Reynolds, 2013).

Considering that gender separates the population in two distinct groups, it is commonly used as a segmentation criterion for marketing and communication strategies (Kraft & Weber, 2012). According to Darley and Smith (1995), this is mainly due to the fact that market segments based on gender are large and easily identifiable, which makes it more profitable for businesses to implement a differentiation strategy. Communication and advertising further contribute to the implementation and reinforcement of cultural and social norms based on gender. By doing so, marketers build positive gender-related associations to sell their products to female and male consumers separately (Schroeder & Borgerson, 1998). Product differentiation consists of changing specific product attributes, such as packaging, price or components, to stand out from the competition and to satisfy a larger group of customers. Distinct product attributes simplify purchasing choice and reach each segment individually to create a higher value to consumers (Darley & Smith, 1995).

1.3 Understanding Cultural and Behavioural Gender-based Differences

Purchasing strongly depends on behavioural and socio-demographic factors (Kotler, 2003; Kotler, Wong, Saunders, & Armstrong, 2005). In line with the above, Mitchell and Walsh (2004) found that gender often serves as an indicator of consumer behaviour. In their research on how gender affects consumer decision-making, the authors claim that female and male consumers shop in a different way and seek different qualities in the products they aim to purchase. Mitchell and Walsh (2004) draw attention to the fact that male consumers are less interested in shopping and more favourable to differentiated products, as these make the purchase decision more evident and are less time consuming. Conversely, their study indicates that female consumers consider shopping in a more recreational manner. This implies that women generally tend to be less concerned about

the time spent in shopping and gain greater satisfaction from purchasing and choosing products among a wide range of options and competition (Mitchell & Walsh, 2004; Dholakia, 1999).

From a communication perspective, Darley and Smith (1995) suggest that female and male consumers differ in the way they process information. The authors claim that women are more inclined to consider objective and subjective information when a product presents low levels of risk, such as personal care items. Yet, female consumers tend to pay more attention to objective information for products presenting a higher risk, such as the purchase of a car. On the other hand, Darley and Smith (1995) report that men favour objective arguments, for both low and moderate risk products. This suggests that female and male consumers present different needs and search for different qualities in the products they intend to purchase. As a result, the authors suggest marketers to adopt a differentiation strategy and adapt product attributes and communication separately to female and male consumers.

1.4   Consumer Perception on Packaging

Packaging is without any doubt a powerful communication tool. Agariya, Johari, Sharma, Chandraul, and Singh (2012) demonstrate that a product's packaging directly creates a brand image, which in turn can reach and influence consumers' perceptions of that product. Based on their research, the authors believe that packaging requires more than basic communication on functional benefits and product information: the shape and design of a product stand as a form of communication that considerably influences purchasing intention.

Van Tilburg, Lieven, Herrmann, and Townsend (2015) provide greater knowledge of gendered aesthetics on products and their influence on consumer behaviour. The scholars suggest that product cues such as shape, colour and material reflect gender norms. Accordingly, gendered packaging reinforces market segmentation by transmitting cultural beliefs of gender and behaviour. In this sense, consumer products generate norms of neutrality, femininity and masculinity. These cultural beliefs enhance the perceived attractiveness of a product and its functionality. Consequently, packaging differentiation simplifies consumer choice by approaching male and female consumers in different ways (Darley & Smith, 1995). Orth and Malkewitz (2008) found that men prefer angular and bold shapes with contrasting colours, whereas women tend to prefer slender shapes and

natural designs of symmetrical and harmonious elements. The communication that indicates whether a product is designed "for men" or "for women" further enhances the social construct of female and male consumers as belonging to two distinct groups. Along these lines, gendered products are claimed to result in higher purchases than products with a rather neutral packaging (Hulbert & Ling, 2007; Lieven, Grohmann, Herrmann, Landwehr, & van Tilburg, 2015; Petersson McIntyre, 2018).

1.5 Consumer Perception on Price

Another relevant communication element on a product is price. Jefkins (1990) defines price as the amount of money exchanged between a seller and a buyer on a market for one unit. Yet, the author claims that the value consumers attribute to a product can translate into a price increase or a price decrease. The higher a buyer perceives the value of a product, the more a seller can increase its price (Jefkins, 1990; Netseva-Porcheva, 2011). According to Netseva-Porcheva (2011), creating value for consumers is the leading source of competitive advantage on the market today. In her paper on value-based pricing, the author explains that the ideal price for a product corresponds to the value that a consumer attributes to that specific product. Liu and Serfes (2011) demonstrate that marketers can choose to systematically adapt and differentiate their price to the corresponding target group, as the demand for a product differs on each consumer segment. Consequently, the authors claim that a business can maximise its benefits. Carpenter et al. (1994) define price differentiation as the most common differentiation strategy on a product. The authors reveal that a product is positively valued by consumers when its price is more expensive than that of the competition. Yet, this is true for both relevant and irrelevant attributes. This means, for instance, that a product that differentiates by better components is as appealing to consumers as one that simply differentiates by colour, on the condition that its price is higher than competitive products on the market.

By means of communication practices and stereotypes about gender norms and behaviours, female and male consumers are led to differ in the value they attribute to a specific product or service and are often considered as belonging to two distinct customer segments on the market (Mitchell & Walsh, 2004; Bakewell & Mitchell, 2006). As indicated earlier, Mitchell and Walsh (2004) find that women are generally willing to pay more than men for specific products, which can translate in a price discrimination, such as the pink

tax. Bakewell and Mitchell (2006) find that men in contrast, favour low-price products in order to simplify their purchase decision. The authors maintain that a majority of male consumers do not like shopping and want to spend the shortest time possible in the store to avoid being confronted with commercial practices. Similarly, Ferrell et al. (2018) argue that male consumers are more favourable towards gender-based pricing in services than female consumers, even if the service provided is exactly the same for both groups. These findings might result from the fact that men generally benefit from paying less, while women suffer from being overcharged.

1.6 Pink Tax Legislation

The discussion and research on gender-based price discrimination and the pink tax has gained significance after the preliminary investigation carried out in 1992 by the DCA in the city of New York. Since 1995, California has drawn up legislation against price discrimination for services and many other states in the United States have followed this regulation to protect consumers (Jacobsen, 2018). This law declares that price differences in services are only justified if these translate in required labour and time differences (DCA, 2015; Jacobsen, 2018). Rather than describing a price "For men" and one "For women", service providers must list the differences of labour required per order. Dry cleaning services, for instance, must list the price per piece of clothing and per type of material. Yet, the DCA (2015) reports over a hundred violations of this law between 2014 and 2015, suggesting that the regulation still struggles to be fully implemented.

In the recent past, Governor Cuomo has drawn a new law to prohibit price discrimination in matters of consumer goods in the state of New York (New York State, 2020). This new reform covers all gendered products on the market considered as "substantially similar" and ensures that any company or brand that violates this law will face civil penalties. The governor justifies price differentiation on the condition that the manufacturing time, efforts, costs, materials or labour differ between the various products. Consequently, Governor Cuomo claims that products that present little difference in components, production materials, design, colour or quality between the female and male gendered version cannot be sold at different prices. Yet, this regulation has not been carried out in the rest of the United States so far, nor in other countries.

So far, Europe has mainly focused on raising awareness among female consumers through the media to buy male or neutral gendered alternatives (Foucaud, 2014; Ellson,

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2016; Manzano-Antón, Martinez-Navarro, & Gavilan-Bouzas, 2018). In Switzerland, for example, the pink tax is not subject to any law. The Federal Council claims that the pink tax is a fair business practice and that there is no need for additional efforts going beyond existing regulations (Bardet, 2016). This statement is based on the assumption that the price disparities between female and male gendered products is not as big in Switzerland as it is in the United States (Bardet, 2016; The Swiss Parliament, 2016). Yet, no official studies have proven the veracity of this argument. In fact, independent investigations conducted by Swiss journalists reveal that the price discrimination based on gender has similar financial consequences on Swiss female consumers as it has on American female consumers (Gillioz, 2019; Zaugg & Emery, 2019).

Nonetheless, Hortsmann and Krämer (2013) suggest that uniform pricing does not appear to be a conceivable and efficient solution either. The authors argue that businesses should implement a different price on each market, based on the inverse elasticity rule in order to maximise profit. Due to differences between female and male consumer preferences, the cross price elasticities of demand from both segments vary and result in different pricing (Stole, 2007; Aguirre, Cowan, & Vickers, 2009; Hortsmann & Krämer, 2013). Moreover, as opposed to services, women are under no obligation to limit themselves in purchasing female gendered products and suffer of price discrimination. They are free to buy neutral or male gendered alternatives. This, however, presupposes that women must overcome strong cultural norms of gender that follow them since their early age (DCA, 2015; Belleflamme, 2015).

2 PROBLEM STATEMENT AND HYPOTHESES

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A large number of studies support the argument that the pink tax is based on the theory that women assign a higher value than men to specific products or services (Carpenter, Glazer, & Nakamoto, 1994; Mitchell & Walsh, 2004; Ferrell et al., 2018). Yet, other studies and theories suggest that there is still considerable ambiguity with regard to this statement and that there has been little discussion on the veracity of these arguments (Duesterhaus et al., 2011; Belleflamme, 2015; DCA, 2015; Dholakia, 2019). The present research is aimed at a better understanding of the pink tax: in particular if differences between female and male consumer preferences for packaging and price can be confirmed. The purpose of this paper is to measure the value both groups of consumers attribute to gendered packaging and price discrimination, in order to find out if the pink tax can indeed be considered as a simple marketing strategy, or if it raises the ethical debate around gender discrimination.

As mentioned earlier, packaging carries a brand image that affects consumer perception of a product and influences purchasing decisions. Consequently, marketers must gather information on consumer behaviour and preferences in order to respond differently to customers' demand. Previous research suggests that female and male consumers differ in the way they perceive and respond to communication elements for products. Therefore, a majority of products present different designs, colours or components to reach male and female consumers separately (Silayoi & Speece, 2007; Dusterhaus et al., 2011; Agariya et al., 2012).

Research on the price differentiation between personal care products marketed towards men and those marketed towards women has brought up interesting results. The study conducted by Duesterhaus et al. (2011) reveals that the industry of personal care products presents the highest rate of price discrimination. The research carried out a few years later in the city of New York by the DCA also relates to these findings (2015). The scholars have demonstrated that personal care products are 13.0% more expensive for women than for men. Because these products are purchased by both gender groups on a high frequency, it represents a large price disparity for women. It is therefore worthwhile to focus on the industry of personal care products.

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One of the personal care products that presents strong price variations between female and male gendered options are disposable razors. On average, female gendered razors are 11.0% more expensive compared to male gendered razors (DCA, 2015). In general, these products only differentiate in packaging, specifically in matters of colour and labelling. However, neutral, female and male gendered disposable razors are essentially composed of similar components. Accordingly, the hypotheses for female consumer preferences below were considered:

H1   Female consumers have a preference for female gendered razors compared to neutral gendered razors.

H2   Female consumers have a preference for female gendered razors compared to male gendered razors.

H3   Female consumers are willing to pay more for female gendered razors compared to cheaper neutral gendered razors.

H4   Female consumers are willing to pay more for female gendered razors compared to cheaper male gendered razors.

Existing research has further revealed that female gendered hair care products cost on average more for than male gendered options 48.0% of the time. Over and above that, male gendered shampoo and conditioner are usually sold in 2-in-1 bottles, whereas female gendered hair care products are generally sold in separate bottles that require the purchase of two distinct products: a shampoo and a conditioner (DCA, 2015). These presumptions have led to the following hypotheses regarding female consumer preferences:

H5   Female consumers have a preference for female gendered shampoo compared to neutral gendered shampoo.

H6   Female consumers have a preference for female gendered shampoo compared to male gendered shampoo.

H7   Female consumers are willing to pay more for female gendered shampoo compared to cheaper neutral gendered shampoo.

H8   Female consumers are willing to pay more for female gendered shampoo compared to cheaper male gendered shampoo.

The study conducted by DCA finally demonstrates that deodorant also presents a high price difference between the female and the male version. It is claimed that deodorant often varies in the quantities sold to both segments, with a higher price and a lower quantity of product for women (DCA, 2015). Consequently, the following hypotheses were taken into account for female consumer preferences:

H9   Female consumers have a preference for female gendered deodorant compared to neutral gendered deodorant.

H10   Female consumers have a preference for female gendered deodorant compared to male gendered deodorant.

H11   Female consumers are willing to pay more for female gendered deodorant compared to cheaper neutral gendered deodorant.

H12   Female consumers are willing to pay more for female gendered deodorant compared to cheaper male gendered deodorant.

3 METHODOLOGY

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3.1   Measuring Consumer Preferences

A consumer's purchase decision process depends on many factors. A product's packaging and price are two communication elements that are found to change considerably between female and male gendered standards (Darley & Smith, 1995; Mitchell & Walsh, 2004; Bakewell & Mitchell, 2006). This paper aims to examine female and male consumer preferences for packaging and price with a view to understand the existence of gender-based price discrimination. As mentioned in the literature review, gender-based products and labelling are found to highly influence packaging preferences and simplify consumer choice by targeting female and male consumers differently (Darley & Smith, 1995; van Tilburg et al., 2015). Similarly, consumer price preferences rely on how consumers perceive the value of a specific product on the market and the value of substitute products (Jefkins, 1990). Measuring consumer price preferences is frequent in business strategies for setting the right price of a new product on the market. It is an important task of the marketing mix strategy (Winer, 2005). This study aims at measuring two features of different personal care products: packaging and price. Three levels of packaging are involved, corresponding to equivalent versions of neutral, female and male gendered products. Similarly, four price levels are covered. These correspond to either an inexpensive, a moderate, a pricier and an expensive price level.

The products selected for this study were collected on the websites of different Swiss retail stores, based on similar packaging and components. Neutral and female gendered products were mainly found on the female categories of the retail websites, while male gendered products were generally selected from the male categories. Some products were explicitly labelled "For women" or "For men", while others were classified as neutral, female or male gendered based on the neutral, pink or blue colours of packaging. As gendered products are scarcely perceived as identical, the three versions for each personal care product belonged to the same brand in an attempt to make their comparison easier (DCA, 2015). In order to measure the packaging feature, some designs were slightly manipulated by the researcher of this study to make them comparable. In the same vein, some of the neutral gendered designs were specifically created for the purpose of this study by using neutral elements of the female or male gendered products.

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3.2 Data Collection Methods

With the purpose of understanding consumer preferences in matters of packaging and price, the data for this study was collected by means of a sample survey using a questionnaire. This provided quantitative data from a selected population (Vilatte, 2007). In order to collect enough data over a short period of time, the survey was conducted online via LimeSurvey. Online surveys require less efforts to proceed to the collection and the analysis of the data (Diekmann, 2007; LimeSurvey, 2020). Respondents were recruited by the same means, mainly via social media share. All efforts were made to collect a total panel of 300 participants, consisting of 150 female and 150 male responses. Non-binary respondents were also accepted in the study for greater analysis and understanding of gender-based marketing and neutral gendered packaging. Yet, there was no specific limitation of responses from that group.

With the intention of analysing the differences among three distinct personal care products, respondents were divided into three groups corresponding to the three products introduced earlier: razors, shampoo and deodorant. This study sought to collect 100 responses for each product, equally divided by the two main samples of respondents, representing 50 female and 50 male participants per product. This separation also considerably reduced the time of the questionnaire, which in turn made it easier for participants to pay clearer attention to the survey.

3.3 Sampling Methods

Because of the limited time frame, a convenience sample of respondents was preferred for this study. The population was tracked during three weeks between the 23rd of November 2020 and the 13th of December 2020 via the following selected online channels: SurveySwap, LinkedIn, Facebook and WhatsApp. Although participants were expected to mainly be Swiss and therefore French and German speaking, the questionnaire was only available in English to avoid any language misinterpretation and confusion between the survey questions. Yet, this choice limited the participants to this study to a sample of respondents with basic skills in the English language. Similarly, the social media distribution channels were an obstacle to obtaining responses from elderly people and considerably limited the participation of this target group.

3.4 Types of Data and Measurement Scales

The present research focused on measuring consumer preferences regarding price and packaging. The questionnaire was designed in such a way that respondents had to choose one option for each question. The survey was divided in two different sections: socio-demographic variables and consumer preferences. In order to collect more honest responses and to make participants feel more comfortable to reply, the options "Other" and "Prefer not to respond" were included in most of the questions in the socio-demographic section. The section of consumer preferences regarding the product they were assigned to also considered a "No preference" option. The products selected for this study were chosen among a wide range of products on the Swiss market and were not always the most popular personal care options for all consumers. Therefore, it was important to make participants provide honest responses in case of no real preference. The data of this study was later collected on LimeSurvey and directly exported to SPSS Statistics for further analysis and manipulations. The codes were inserted during the making of the online questionnaire to simplify the data analysis.

3.4.1 Socio-demographic Variables

The first section of the survey aimed at collecting socio-demographic data of the sample population. Many scholars have demonstrated the relevance of demographic factors in marketing and communication studies (Kotler, 2003; Kotler et al., 2005; Hervé & Mullet, 2009; Kumar, 2014). Factors such as gender, age, educational background, occupation and level of income are found to strongly influence consumer behaviour and purchase decisions. Although the personal care products selected for this study are purchased by most consumers at a high frequency, socio-demographic variables can provide interesting differences regarding packaging and price preferences.

As mentioned previously, a person's gender is based on social and psychological norms, while a person's sex is mainly determined at birth. As the main purpose of this study was to measure differences among consumers relating to female and male gendered norms, it was important to determine the gender group participants referred to. On a frequency scale, respondents were first asked to indicate whether they identified themselves as belonging to the gender group "Female", "Male" or "Other".

Age also plays an important role in the consumer purchase decision process. The value consumers attribute to features of specific products change and evolve as they grow older.

On a descriptive scale, respondents were asked to express their age. Underaged participants were not allowed to take part in the study.

In the same vein, educational background is found to influence consumer behaviour and information gathering before making a purchase decision. The level of education of the respondents to this study was measured on a frequency scale. Participants were asked to select their corresponding educational background between "Secondary school", "High school or equivalent", "Bachelor's degree", "Master's degree", "Professional degree", "Doctorate degree" or the option "Other".

Participants' current occupation is another indicator claimed to predict consumer behaviour in matters of needs and purchasing decisions. Respondents were asked to indicate their occupation based on a frequency scale between "Student", "Employed full-time", "Employed part-time", "Self-employed", "Seeking opportunities", "Retired" and "Other".

Finally, it was important to collect respondents' level of income in order to measure differences regarding consumer preferences. Lower levels of income undoubtedly lead to the purchase of fewer products or cheaper options. Similarly, higher incomes show tendencies for purchasing more premium products. On a frequency scale, participants were asked to estimate their monthly level of income among the options "between CHF 0 and 4,000", "between CHF 4,001 and 8,000", "between CHF 8,001 and 12,000", "between CHF 12,001 and 16,000", "above CHF 16,001" and "Prefer not to respond".

3.4.2 Consumer Preferences in Packaging and Price

The survey was identically conceived for female and male respondents, as well as for non-binary participants. As LimeSurvey did not provide a simple option for random assignment of participants into the three groups of products, the survey included a question asking participants to select one item between "Product 1", for razors, "Product 2", for shampoo and "Product 3" for deodorant. Respondents were not informed about the nature of the products hidden behind the three items and each option was limited to 50 female and 50 male participants. There was no limit for non-binary respondents. Once the number of female and male participants for a particular product was reached, respondents were kindly requested to select another product.
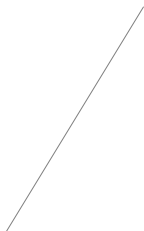
With the purpose of collecting reliable data, Green and Srinivasan (1990) suggest to apply paired comparisons. Accordingly, the products were presented in pairs to the respondents,

who were asked to indicate their favourite option among each pair. This section was conceived identically for each product, presenting all possible 48 combinations of paired comparisons varying between neutral, female and male gendered packaging, and representing either a cheap, a moderate, a pricier or an expensive price option. For each pair, respondents were asked to choose the product they preferred, or to opt for the "No preference" option in case of hesitation.

3.4.3   Paired Comparisons: Razor Preferences

The first sample of respondents was exposed to a set of razors varying in packaging and price. All three packagings belonged to the same brand under an identical product name, and presented the same number of blades (see Table 1). Respondents were asked to indicate their favourite option among each possible pair of razors presenting a neutral (RAZN), a female (RAZF), or a male gendered packaging (RAZM), that varied on four levels of price, namely an inexpensive (RAZ1), a moderate (RAZ2), a pricier (RAZ3), and an expensive option (RAZ4). The packaging feature varied in colour and labelling, namely a grey razor with no labelling for the neutral gendered product, a pink razor with a labelling "For women" for the female gendered option, and a blue razor with a labelling "Men" for the male gendered alternative. The type of razors analysed for this study were disposable with replaceable blades. Razor preferences presumed that respondents were consumers of this type of razors. In case of hesitation or no specific preference, participants could opt for the "No preference" option for each pair. Respondents' personal preferences in matters of brand and razor type could strongly contribute to them selecting this option.

Table 1: Razor Features

Product 1: RAZ	Level 1	Level 2	Level 3	Level 4
Packaging feature				
	RAZN	RAZF	RAZM	
Price feature	CHF 6.95	CHF 8.95	CHF 11.95	CHF 14.95
	RAZ1	RAZ2	RAZ3	RAZ4

3.4.4 Paired Comparisons: Shampoo Preferences

The next sample of participants was exposed to a set of shampoos with differences in packaging and price. The three packagings chosen for this product were marketed by the same brand and had been slightly modified by the researcher to be labelled under an identical name (see Table 2). Participants were first solicited to select their favourite combination of packaging and price for each pair among a neutral (SHMN), a female (SHMF), and a male gendered shampoo (SHMM), which were offered at either an inexpensive (SHM1), a moderate (SHM2), a pricier (SHM3), or an expensive price (SHM4). The packaging feature presented differences in colour and labelling, namely a grey shampoo with no labelling for the neutral gendered product, a pink shampoo with a labelling "Women" for the female gendered option, and a dark grey shampoo with a labelling "Men" for the male gendered version. The different products in this section were presented as volumizing shampoos. Consumer preferences presupposed that respondents had the intention of buying this type of shampoo, although the lack of different options might have prevented some participants from having a preference. A "No preference" option was included for each existing pair.

Table 2: Shampoo Features

Product 2: SHAM	Level 1	Level 2	Level 3	Level 4
Packaging feature	SHMN	SHMF	SHMM	
Price feature	CHF 2.25 SHM1	CHF 2.95 SHM2	CHF 3.65 SHM3	CHF 4.35 SHM4

3.4.5 Paired Comparisons: Deodorant Preferences

The last sample of participants of the questionnaire was exposed to a set of deodorants varying in packaging and price. The female and male gendered deodorants selected for this research belonged to the same brand and were marketed under the same name. The neutral gendered option was specifically created for the purpose of this study and presented both female and male gendered attributes (see Table 3). Participants were asked to indicate their favourite combination between all possible pairs among a neutral

(DEON), a female (DEOF), and a male gendered deodorant (DEOM), offered at four different levels of price, respectively an inexpensive (DEO1), a moderate (DEO2), a pricier (DEO3), and an expensive price (DEO4). The packaging feature varied in colour and labelling, specifically a grey deodorant with no labelling for the neutral gendered product, a pink deodorant with a labelling "Women" for the female gendered version, and a dark blue deodorant with a labelling "Men" for the male gendered option. Deodorant preferences were based on the assumption that respondents were consumers of roll-on deodorant. Yet, it was critical to keep in mind that some consumers preferred crème or spray options. A "No preference" option was integrated for each pair.

Table 3: Deodorant Features

Product 3: DEO	Level 1	Level 2	Level 3	Level 4
Packaging feature	DEON	DEOF	DEOM	
Price feature	CHF 1.90 DEO1	CHF 2.20 DEO2	CHF 2.60 DEO3	CHF 3.40 DEO4

3.5   Research Approach: Common Factor Analysis

In a preliminary phase, all incomplete and unreliable responses were identified and excluded from the database. Partial responses might reflect a lack of engagement from participants, and were therefore immediately left out. Similarly, inconsistent and systematic "No preference" responses also suggested some level of disinterest from respondents. Considering that these answers could potentially lead to biased results, it was decided to exclude them as well from the database.

With the purpose of simplifying data analysis on SPSS Statistics, this study proceeded to a common factor analysis to reduce the number of variables. This statistical method is used to draw common variance from similar variables and combine these into a common score. Paired comparisons for each product were divided into three groups of comparison between neutral and female gendered options, female and male gendered options, and neutral and male gendered options of the given product. Each of these groups was further

divided into three additional parts. The first part included the six paired comparisons of each product where the first packaging option was more expensive than the second one. The following section covered the four paired comparisons of each product that presented equal prices between both packaging versions. The last section finally presented the six paired comparisons where the first option was cheaper than the second one. In all cases, one single component was found as a mean of each group of variables. With the intention of verifying the accuracy within the new factors, the value for Cronbach's alpha was measured and a correlation matrix was performed (Nunnally, 1978; Cohen, 1988). These estimations made it possible to extract a common factor for each group of paired comparisons and consider that the items in the same group measured an identical variable. Correlation was considered as statistically significant for the following levels: coefficients between .3 and .5 were considered as low positive correlations, while coefficients between .5 and .7 were interpreted as moderate positive correlations. High positive correlations were falling between .7 and .9, whereas coefficients between .9 and 1.0 confirmed very high positive correlations (Peterson, 1994, Mukaka, 2012).

3.6   Research Approach: Consistency Table Analysis

Cross-tabulations of variables, also known as consistency tables, are a widely used analytical tool in market research displaying descriptive statistics to show the relation between two variables (White, 2004; Lewis-Beck, Bryman, & Futing Liao, 2011). In an attempt to examine the relation between gender and preferences for packaging and price, the research approach of this study applied a cross-tabulation analysis. In line with this framework criteria, frequencies of co-occurrence within the categorical data were displayed in consistency tables. With the aim of verifying the hypotheses presented above, the relation between the independent variable, in this case gender, and the dependent variable, specifically packaging and price preferences, frequencies were tabulated in consistency tables. In conformity with this approach, it was possible to draw trends within female and male responses and measure if gender predicted packaging and price preferences relating to razors, shampoo and deodorant. The final step of data analysis required to perform Pearson's chi-squared tests. These statistics aim at testing significance of descriptive data from consistency tables and rejecting the null hypothesis that two variables are independent from each other (Cremonezi, 2018). Estimations for p-values of .05 or less presume that gender and preferences for packaging or price are not unrelated.

4 DESCRIPTIVES AND COMMON FACTOR ANALYSIS

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4.1   Socio-demographic Frequencies

The data collected from the online questionnaire consisted of a sample of 294 participants, equally divided by 145 female (49.3%) and 145 male respondents (49.3%). Considering that the aim of this research was to analyse perception differences between men and women, the equal distribution obtained in terms of gender was profitable to this study. The remaining 4 participants did not refer to the male or the female gender (1.4%). These participants were considered as non-binary.

The population was aged between 19 and 86 years old. The mean age of the sample revealed that a significant portion was young (M = 31.9). Indeed, 204 respondents of the sample belonged to an age group between 19 and 30 years old (69.4%). Another 38 subjects were aged between 31 and 45 years old (12.9%), whereas 37 belonged to an age group between 46 and 60 years old (12.6%). The last 15 respondents were classified into an older group aged between 61 and 86 years old (5.1%).

With regard to the educational background, the descriptives revealed a high portion of participants with an academic education. As a matter of fact, only a small group of 2 respondents did not pursue an education after compulsory school (0.7%), whereas 53 had a high school or equivalent diploma (18.0%). Another 129 participants obtained a Bachelor's degree (43.9%), while 84 indicated having a Master's degree (28.6%). A group of 12 respondents obtained a professional degree (4.1%), whereas only 6 had a doctoral degree (2.0%). The final 8 respondents obtained other diplomas that were not included in these categories (2.7%).

The occupation variable showed that exactly half of the sample, corresponding to 147 participants, were students at the moment of the survey (50.0%). The remaining half was divided into different employment categories. Accordingly, 79 respondents were employed full-time (26.9%), while 21 had a part-time job (7.1%). A small group of 15 participants was identified as self-employed (5.1%), whereas 16 were seeking opportunities (5.4%). A small group of 14 participants was retired (4.8%). Only 2 subjects did not fit into any of the suggested occupations (0.7%).

The level of income further revealed that a significant portion of the sample population had a low level of income, which might have impacted the preferences for the price attribute. As a matter of fact, 162 participants, representing more than half of the sample, had a monthly income between CHF 0 and 4,000 (55.1%). Another 46 respondents indicated having a salary between CHF 4,001 and 8,000 (15.6%), while 20 had an income between CHF 8,001 and 12,000 (6.8%). A smaller group of 6 respondents had a monthly income between CHF 12,001 and 16,000 (2.0%), and 14 had a salary above CHF 16,001 (4.8%). The final group of 46 participants preferred not to provide information on their income (15.6%).

4.2 Common Factor Analysis: Razors

Frequencies for the three personal care products revealed that the panel of female and male participants was divided almost equally between the three different groups. A total of 99 participants were exposed to the paired comparisons for razors. This group consisted of an identical portion of 48 female (48.5%) and 48 male respondents (48.5%). The remaining 3 participants were identified as non-binary (3.0%).

In order to proceed to a factor analysis for the data gathered from paired comparisons for razors, it was necessary to separate the variables into three different groups of comparisons related to packaging: a first group of comparisons between neutral and female gendered packaging, a second group of comparisons between female and male gendered packaging, and a final group of comparisons between neutral and male gendered packaging. Each of these segments was further split into three different pricing groups: when one of the two packagings was more expensive than the other, when prices were equal, and when the first packaging was cheaper by comparison. The table below specifies the number of observations that were included in the analysis (see Table 4). The case processing summary demonstrates that 100.0% of the 99 observations were retained, which suggests that there were no missing values in the database.

Table 4: Case Processing Summary
Razors

		N	%
Cases	Valid	99	100,0
	Excluded[a]	0	,0
	Total	99	100,0

a. Listwise deletion based on all variables in the procedure.

4.2.1 Neutral-gendered Razors Compared to Female-gendered Razors

The first factor analysis was aimed at reducing the number of variables for paired comparisons between more expensive neutral gendered razors and cheaper female gendered alternatives (see Table 5). Preferences for the six paired comparisons were measured on a three-point scale, covering preferences for more expensive neutral gendered razors (-1.0), no preference (.0), and preferences for cheaper female gendered options (1.0). The means of preferences laid within a range of -.2 to .1. This illustrates that, on average, the 99 respondents did not show a specific preference between the given paired comparisons. These results are not surprising, as they include responses from all genders confounded.

Table 5: Item Statistics Neutral Razors More Expensive than Female Razors

	Mean	Std. Deviation	N
RAZN4F1	,08	,965	99
RAZN4F2	,04	,968	99
RAZN4F3	-,10	,974	99
RAZN3F1	,07	,972	99
RAZN3F2	-,10	,985	99
RAZN2F1	-,15	,983	99

With the intention of measuring internal consistency within the six items, Cronbach's alpha was estimated (see Table 6). The value presumed that the set of items was highly reliable (α = .948), which presumes that the items for this three-point composite scale could be compacted into a common factor (Nunnally, 1978).

Table 6: Reliability Statistics Neutral Razors More Expensive than Female Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,948	,948	6

Similarly, a correlation matrix was performed to present an overview of the inter-correlations between the variables (see Table 7). Results indicate that the items presented a moderate positive correlation (r > .5), which confirmed that a common factor could be extracted from these variables to simplify the data analysis (Cohen, 1988; Mukaka, 2012).

Table 7: Inter–Item Correlation Matrix Neutral Razors More Expensive than Female Razors

	RAZN4F1	RAZN4F2	RAZN4F3	RAZN3F1	RAZN3F2	RAZN2F1
RAZN4F1	1,000	,750	,703	,788	,728	,690
RAZN4F2	,750	1,000	,794	,756	,839	,661
RAZN4F3	,703	,794	1,000	,741	,819	,794
RAZN3F1	,788	,756	,741	1,000	,690	,738
RAZN3F2	,728	,839	,819	,690	1,000	,775
RAZN2F1	,690	,661	,794	,738	,775	1,000

Another factor analysis was run to reduce the number of variables for paired comparisons measuring preferences between female (-1.0) and neutral gendered razors (1.0) under an identical price. The overview shows an average of preferences between .3 and .4, indicating that respondents did not have a general preference for either product (see Appendix A: Table 8). The value measured for Cronbach's alpha further established that the four items presented internal consistency (α = .953) (see Appendix A: Table 9). The correlation matrix confirmed that a common factor could be extracted as the four variables presented a strong positive correlation (r > .7) (see Appendix A: Table 10).

The final factor analysis focused on extracting a common factor from paired comparisons covering preferences between pricier female gendered razors (-1.0) and cheaper neutral gendered options (1.0). The average of responses were included in a scale from .6 to .8, suggesting that participants had a general preference for less expensive neutral gendered razors (see Appendix A: Table 11). The value of Cronbach's alpha confirmed that the six items presented internal consistency (α = .889) (see Appendix A: Table 12). Similarly, the correlation matrix revealed low positive correlation within the variables (r > .3), suggesting that a common factor could be extracted (see Appendix A: Table 13).

4.2.2 Female-gendered Razors Compared to Male-gendered Razors

In an attempt to reduce the number of variables, a factor analysis was performed on paired comparisons covering preferences between cheaper male gendered razors (-1.0) and pricier female gendered options (1.0). Findings show a general tendency between .4 and .7, suggesting that there was a little preference for cheaper male gendered razors (see Appendix A: Table 14). Cronbach's alpha was further measured in an effort to establish internal consistency for the six items (α = .939) (see Appendix A: Table 15). The correlation matrix finally confirmed that the variables were moderately correlated (r > .5), presuming that a common factor could be extracted (see Appendix A: Table 16).

The next factor analysis was applied to paired comparisons covering preferences between male (-1.0) and female gendered packaging (1.0). The average of responses was -.2, implying that there was no specific preference between both packagings (see Appendix A: Table 17). The value measured for Cronbach's alpha further confirmed that the four items presented internal consistency (α = .963) (see Appendix A: Table 18). In the same vein, the correlation matrix showed that the variables presented a strong positive correlation (r > .7), suggesting that a common factor could be extracted (see Appendix A: Table 19).

A factor analysis was ultimately applied to reduce the variables for paired comparisons considering preferences between more expensive male gendered razors (-1.0) and cheaper female gendered alternatives (1.0). On average, preferences were between .0 and .2, indicating that there was no specific preference for either option (see Appendix A: Table 20). The measurement of Cronbach's alpha confirmed that the six items had internal consistency (α = .960) (see Appendix A: Table 21). Along the same lines, the overview of the correlation matrix revealed that the six variables were strongly correlated (r > .7), and that a common factor could be extracted for the data analysis (see Appendix A: Table 22).

4.2.3 Neutral-gendered Razors Compared to Male-gendered Razors

Another factor analysis was aimed at reducing the number of variables for paired comparisons measuring preferences between more expensive neutral gendered razors (-1.0) and cheaper male gendered versions (1.0). The outcome demonstrates that participants had an average preference between .4 and .6. This suggests that there was a general preference for cheaper male gendered razors (see Appendix A: Table 23). The value for Cronbach's alpha established that the six items presented internal consistency (α = .925) (see Appendix A: Table 24). The correlation matrix further confirmed that the set of variables presented sufficient correlation indicating that a common factor could be extracted (r > .5) (see Appendix A: Table 25).

The next factor analysis considered paired comparisons estimating preferences between male (-1.0) and neutral gendered razors (1.0) presenting an equal price. The average of responses were around .0, suggesting that there was no specific preference for either packaging (see Appendix A: Table 26). Cronbach's alpha was further measured in an effort to establish internal consistency for the four items (α = .951) (see Appendix A: Table 27). The correlation matrix finally indicated that the variables were sufficiently correlated to extract a common factor (r > .7) (see Appendix A: Table 28).

Finally, a factor analysis between more expensive male gendered razors (-1.0) and cheaper neutral gendered options (1.0) was performed. On average, responses were included between .2 and .6. This suggests that there was a preference for cheaper neutral gendered razors (see Appendix A: Table 29). The value measured for Cronbach's alpha confirmed that the six items presented sufficient internal consistency (α = .914) (see Appendix A: Table 30). The correlation matrix further revealed that the six variables presented sufficient correlation to extract a common factor for the data analysis ($r > .5$) (see Appendix A: Table 31).

4.3 Common Factor Analysis: Shampoo

With regard to the paired comparisons of shampoo, data from a total of 98 respondents was collected. The sample was divided between 49 female (50.0%) and 48 male participants (49.0%). Only 1 subject was identified as non-binary (1.0%).

The data for shampoo was split into three different pairs of packaging: a first group of comparisons between neutral and female gendered packaging, another group consisting of comparisons between female and male gendered packaging, and a final group focusing on comparisons between neutral and male gendered packaging. These segments were further divided into three tests related to price: when one of the packagings was more expensive than the alternative packaging, when both prices were the same, and when the first shampoo was less expensive than the other version. The following table indicates that all the 98 responses were retained in the analysis (100.0%), and that no values were missing (see Table 32).

Table 32: Case Processing Summary Shampoo

		N	%
Cases	Valid	98	100,0
	Excluded[a]	0	,0
	Total	98	100,0

a. Listwise deletion based on all variables in the procedure.

4.3.1 Neutral-gendered Shampoo Compared to Female-gendered Shampoo

The first factor analysis was focused on reducing the number of variables for paired comparisons between more expensive neutral gendered shampoo and cheaper female gendered alternatives (see Table 33). The elements were measured on a three-point

scale, based on preferences for more expensive neutral gendered shampoo (-1.0), no preference (.0), and preferences for less expensive female gendered options (1.0). The following table demonstrates that, for the six items, observations between .0 and .2 were included (see Table 33). The average of the 98 responses demonstrated a tendency for not having any preference between the two options. This was to be expected, as female and male responses were not measured separately for the factor analysis.

Table 33: Item Statistics Neutral Shampoo More Expensive than Female Shampoo

	Mean	Std. Deviation	N
SHMN4F1	,13	,981	98
SHMN4F2	,17	,964	98
SHMN4F3	,00	,984	98
SHMN3F1	,02	,995	98
SHMN3F2	,07	,997	98
SHMN2F1	,01	,990	98

In an effort to measure internal consistency for the six items, Cronbach's alpha was estimated (see Table 34). The value confirmed that the set of items was highly reliable (α = .955). This suggests that the items for this three-point composite scale could be compacted into a single component (Nunnally, 1978).

Table 34: Reliability Statistics Neutral Shampoo More Expensive than Female Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,955	,955	6

As a final step, a correlation matrix was performed to show an overview of the inter-correlation within the variables (see Table 35). The observation confirms that the variables were strongly correlated and that a common factor could be extracted to simplify the data analysis (r > .7) (Cohen, 1988; Mukaka, 2012).

Table 35: Inter-Item Correlation Matrix Neutral Shampoo More Expensive than Female Shampoo

	SHMN4F1	SHMN4F2	SHMN4F3	SHMN3F1	SHMN3F2	SHMN2F1
SHMN4F1	1,000	,870	,844	,716	,823	,732
SHMN4F2	,870	1,000	,750	,771	,770	,777
SHMN4F3	,844	,750	1,000	,727	,819	,730
SHMN3F1	,716	,771	,727	1,000	,809	,733
SHMN3F2	,823	,770	,819	,809	1,000	,803
SHMN2F1	,732	,777	,730	,733	,803	1,000

In the same way, paired comparisons covering preferences between female (-1.0) and neutral gendered shampoo (1.0) with equal prices were submitted to a factor analysis. Results suggest that respondents showed a tendency for preferences varying between .2 and .3 (see Appendix A: Table 36). This indicates that there was no true significant preference between neutral and female gendered packaging. Cronbach's alpha was further measured in an effort to establish internal consistency for the six items (α = .924) (see Appendix A: Table 37). The correlation matrix confirmed that the variables were sufficiently correlated to extract a common factor (r > .7) (see Appendix A: Table 38).

Finally, paired comparisons of preferences between more expensive female gendered shampoo (-1.0) and cheaper neutral gendered options (1.0) were submitted to factor analysis. The outcome shows preferences between .6 and .7, suggesting that, on average, participants preferred less expensive neutral gendered shampoo (see Appendix A: Table 39). The value measured for Cronbach's alpha established that the six items presented internal consistency (α = .885) (see Appendix A: Table 40). Similarly, the correlation matrix revealed that the variables presented low positive correlation (r > .3), confirming that a common factor could be extracted for the data analysis (see Appendix A: Table 41).

4.3.2 Female-gendered Shampoo Compared to Male-gendered Shampoo

The next step involved running a factor analysis for paired comparisons covering preferences between more expensive female gendered shampoo (-1.0) and cheaper male gendered versions (1.0). On average, responses fell between .0 and .3 (see Appendix A: Table 42). This implied that there was not a clear tendency for any of both options. The value for Cronbach's alpha established that the set of items was highly reliable (α = .956) (see Appendix A: Table 43). The correlation matrix further revealed that the variables were sufficiently correlated to extract a common factor (r > .7) (see Appendix A: Table 44).

Another factor analysis was performed on paired comparisons measuring preferences

between male (-1.0) and female shampoo packaging (1.0) presenting an identical price. Responses were on average around .0 (see Appendix A: Table 45). These findings indicate that there was not a general tendency between any of the responses. The estimation of Cronbach's alpha further suggested that the four items were highly reliable (α = .963) (see Appendix A: Table 46). Similarly, the correlation matrix confirmed that the variables were strongly correlated and that a common factor could be extracted ($r > .7$) (see Appendix A: Table 47).

A final factor analysis was applied to paired comparisons covering preferences between pricier male gendered shampoo (-1.0) and cheaper neutral gendered alternatives (1.0). The average of preferences scored between .2 and .3, indicating that there was no apparent preference (see Appendix A: Table 48). The value measured for Cronbach's alpha further revealed that the six items presented internal consistency (α = .967) (see Appendix A: Table 49). The correlation matrix finally confirmed that the variables were sufficiently correlated to extract a common factor to simplify data analysis ($r > .7$) (see Appendix A: Table 50).

4.3.3 Neutral-gendered Shampoo Compared to Male-gendered Shampoo

The next factor analysis was performed on paired comparisons estimating preferences between more expensive neutral gendered shampoo (-1.0) and cheaper male gendered alternatives (1.0). On average, respondents had preferences scoring between -.1 and .2. This indicates that there was no general preference between either option (see Appendix A: Table 51). The value measured for Cronbach's alpha confirmed that the six items presented sufficient internal consistency (α = .932) (see Appendix A: Table 52). Finally, the correlation matrix revealed that the variables were sufficiently correlated ($r > .5$), and that a common factor could be extracted for the data analysis (see Appendix A: Table 53).

A factor analysis was further applied to reduce the number of variables for paired comparisons of shampoo between male (-1.0) and neutral gendered packaging (1.0) with equal prices. On average, respondents had a preference scoring .4, which reveals a little tendency for preferring neutral gendered packaging (see Appendix A: Table 54). The value for Cronbach's alpha presumed that the four items presented internal consistency and were highly reliable (α = .917) (see Appendix A: Table 55). The correlation matrix further confirmed that the variables were moderately correlated ($r > .7$), suggesting that a common factor could be extracted (see Appendix A: Table 56).

Paired comparisons of shampoo preferences between more expensive male gendered products (-1.0) and cheaper neutral gendered options (1.0) were also submitted to a factor analysis. The average of preferences ranged from .7 to .8, revealing a clear tendency for cheaper neutral gendered shampoo preferences (see Appendix A: Table 57). The value estimated for Cronbach's alpha further established that the six items presented internal consistency (α = .890) (see Appendix A: Table 58). Similarly, the correlation matrix revealed that the variables had low positive correlation ($r > .3$), suggesting that a common factor could be extracted from these variables (see Appendix A: Table 59).

4.4 Common Factor Analysis: Deodorant

The last panel of respondents was exposed to paired comparisons of deodorant. This sample consisted of 97 participants, divided between 48 female (49.5%) and 49 male respondents (50.5%).

In order to perform a factor analysis on the data collected from the sample of respondents exposed to paired comparisons for deodorant, variables were separated into three parts: comparisons between neutral and female gendered packaging, comparisons between female and male gendered packaging, and comparisons between neutral and male gendered packaging. Each of these parts was further divided into three groups relating to price: when one of the packagings was more expensive than the other one, when prices were identical, and when the first product was more expensive. The following table reveals that all of the 97 responses were retained in the database (100.0%) (see Table 60).

Table 60: Case Processing Summary Deodorant

		N	%
Cases	Valid	97	100,0
	Excluded[a]	0	,0
	Total	97	100,0

a. Listwise deletion based on all variables in the procedure.

4.4.1 Neutral-gendered Deodorant Compared to Female-gendered Deodorant

A factor analysis was run for the data collected for neutral gendered deodorant compared to female gendered deodorant. The first measure included paired comparisons where neutral gendered deodorant was more expensive than female gendered alternatives. The table below reveals the descriptive statistics for the six items (see Table 61). Preferences

were measured on a three-point scale, specifically preferences for more expensive neutral gendered deodorant (-1.0), no preference (.0), and preferences for less expensive female gendered options (1.0). The means of preferences varied between -.1 and .0, indicating that female and male respondents did not manifest any clear preference between both options.

Table 61: Item Statistics Neutral Deodorant More Expensive than Female Deodorant

	Mean	Std. Deviation	N
DEON4F1	,14	,968	97
DEON4F2	,03	,984	97
DEON4F3	,08	,975	97
DEON3F1	-,04	,989	97
DEON3F2	-,07	1,003	97
DEON2F1	-,04	,999	97

The following stage consisted of measuring internal consistency for the six items (see Table 62). The value for Cronbach's alpha established that the set of items was highly reliable (α = .962) (Nunnally, 1978).

Table 62: Reliability Statistics Neutral Deodorant More Expensive than Female Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,962	,962	6

The correlation matrix ultimately confirmed that the variables were sufficiently correlated (r > .7) (see Table 63). The outcome suggests that a common factor could be extracted for the data analysis (Cohen, 1988; Mukaka, 2012).

Table 63: Inter-Item Correlation Matrix Neutral Deodorant More Expensive than Female Deodorant

	DEON4F1	DEON4F2	DEON4F3	DEON3F1	DEON3F2	DEON2F1
DEON4F1	1,000	,837	,892	,746	,762	,738
DEON4F2	,837	1,000	,801	,805	,794	,764
DEON4F3	,892	,801	1,000	,824	,858	,859
DEON3F1	,746	,805	,824	1,000	,817	,800
DEON3F2	,762	,794	,858	,817	1,000	,850
DEON2F1	,738	,764	,859	,800	,850	1,000

Paired comparisons of preferences between female (-1.0) and neutral gendered deodorant (1.0) presenting an equal price were further submitted to a factor analysis. Findings show a general tendency of preferences between .3 and .4, presuming that respondents did not show a significant preference between both packagings (see Appendix A: Table 64). Cronbach's alpha further confirmed internal consistency (α = .927) (see Appendix A: Table 65). Similarly, the correlation matrix indicated that the variables were sufficiently correlated (r > .5), making it possible to extract a common factor (see Appendix A: Table 66).

Along the same lines, a factor analysis was applied to reduce the number of variables for paired comparisons between more expensive female gendered deodorant (-1.0) and cheaper neutral gendered options (1.0). On average, responses scored between .6 and .8, suggesting a general preference for less expensive neutral gendered deodorant (see Appendix A: Table 67). The value for Cronbach's alpha confirmed that the six items presented internal consistency (α = .924) (see Appendix A: Table 68). The correlation matrix further established that the variables had a moderate positive association (r > .5), suggesting that a common factor could be extracted (see Appendix A: Table 69).

4.4.2 Female-gendered Deodorant Compared to Male-gendered Deodorant

The next step involved running a factor analysis for paired comparisons on preferences between pricier female gendered deodorant (-1.0) and cheaper male gendered options (1.0). In general, responses scored an average between .2 and .4 (see Appendix A: Table 70). This indicates that there was not a particular general preference between both options. The value for Cronbach's alpha established that the set of items was highly reliable (α = .967) (see Appendix A: Table 71). The correlation matrix further revealed that the variables were sufficiently correlated to extract a common factor (r > .7) (see Appendix A: Table 72).

A factor analysis was further applied to reduce the number of variables for paired comparisons between male (-1.0) and female gendered deodorant (1.0) with equal prices. On average, respondents had a preference scoring -.1, which suggests that there was no general preference among both packagings (see Appendix A: Table 73). The value for Cronbach's alpha established that the four items presented internal consistency (α = .984) (see Appendix A: Table 74). In the same vein, the correlation matrix presumed that the variables were strongly associated (r > .9). This outcome suggests that a common factor could be extracted (see Appendix A: Table 75).

The final factor analysis consisted of extracting a common factor for paired comparisons covering preferences between more expensive male gendered deodorant (-1.0) and cheaper female gendered versions (1.0). Respondents scored an average between .0 and .2, suggesting that there was no general preference between both products (see Appendix A: Table 76). The estimation of Cronbach's alpha confirmed internal consistency within the six items (α = .981) (see Appendix A: Table 77). Similarly, the inter-item correlation matrix confirmed that the six variables were strongly correlated (r > .7), and that a common factor could be extracted for the data analysis (see Appendix A: Table 78).

4.4.3 Neutral-gendered Deodorant Compared to Male-gendered Deodorant

The following factor analysis involved paired comparisons for preferences between more expensive neutral gendered deodorant (-1.0) and cheaper male gendered alternatives (1.0). The average of responses scored between .1 and .4, which suggests that there was a small yet not significant preference for cheaper male gendered options (see Appendix A: Table 79). The value measured for Cronbach's alpha revealed that the six items were highly reliable (α = .967) (see Appendix A: Table 80). A correlation matrix further confirmed that the variables were sufficiently correlated to extract a common factor (r > .7) (see Appendix A: Table 81).

Paired comparisons of preferences between male (-1.0) and neutral gendered deodorant (1.0) presenting an equal price were further submitted to factor analysis. The average of responses ranged between .0 and .1, indicating that there was no general preference for either packaging (see Appendix A: Table 82). The value of Cronbach's alpha suggested that the four items presented internal consistency (α = .981) (see Appendix A: Table 83). Likewise, the correlation matrix confirmed that the variables were strongly correlated (r > .7), and that a common factor could be extracted (see Appendix A: Table 84).

Finally, a factor analysis for paired comparisons covering preferences between more expensive male gendered deodorant (-1.0) and cheaper neutral gendered options (1.0) was performed. The average of responses scored between .5 and .6, implying that there was a general preference for cheaper neutral gendered deodorant (see Appendix A: Table 85). The value for Cronbach's alpha further confirmed that the set of items was highly reliable and presented internal consistency (α = .939) (see Appendix A: Table 86). The correlation matrix finally revealed that the variables had a low positive association (r > .3), enabling to extract a common factor for the data analysis (see Appendix A: Table 87).

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5 RESULTS AND DISCUSSION

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5.1   Feature Preferences: Razors

5.1.1   Razors: Crossing Gender and Packaging Preferences

In an attempt to examine the relation between gender and packaging preferences for razors, descriptive statistics were presented in consistency tables for the three possible pairs: pairs of neutral and female gendered razors, pairs of female and male gendered razors, and pairs of neutral and male gendered razors. The outcome of each consistency table was further illustrated by bar charts.

The first consistency table concerned pairs of neutral and female gendered razors with identical prices (see Table 88). The outcome seems to indicate that women had a slight preference for female gendered razors compared with neutral gendered options when both products present equal prices. Findings reveal that 22 female respondents preferred female gendered packaging (45.8%), whereas 14 of them had a preference for neutral gendered razors (29.2%). The final 12 female respondents did not indicate any preference for either option (25.0%). Men, however, manifested a clear preference for neutral gendered razors, as 43 opted for this packaging (89.6%). More interestingly, it appears that 0 male respondents preferred female gendered packaging when compared with neutral gendered alternatives (0.0%). The remaining 5 men did not have any preference (10.4%). The group of non-binary respondents finally showed a slight preference for female gendered razors. Yet this number was too small to be significant for the present research.

Table 88: Crosstabulation Gender * Neutral-gendered Razors vs. Female-gendered Razors

			Packaging			
			Female Razor	No preference	Neutral Razor	Total
Gender	Other	Count	2	0	1	3
		%	66,7%	0,0%	33,3%	100,0%
	Female	Count	22	12	14	48
		%	45,8%	25,0%	29,2%	100,0%
	Male	Count	0	5	43	48
		%	0,0%	10,4%	89,6%	100,0%
Total		Count	24	17	58	99
		%	24,2%	17,2%	58,6%	100,0%

A chi-squared test was further performed to examine the relation between gender and packaging preferences (see Table 89). The p-value presented in the following table rejected the null hypothesis that gender and packaging preferences were unrelated, X^2 (4, n = 99) = 41.89, p < .001. In the case of razors, the bar chart confirms that women were more likely to prefer female gendered razors when compared with neutral gendered alternatives, while men significantly preferred neutral gendered razors (see Figure 1).

Table 89: Chi-Square Tests Neutral vs. Female Razor Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	41,887[a]	4	,000
Likelihood Ratio	51,952	4	,000
Linear-by-Linear Association	37,175	1	,000
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,52.

Another consistency table crossed gender and packaging preferences between female and male gendered razors (see Appendix B: Table 90). The outcome reveals that women had a significant preference for female gendered razors when compared with male gendered options. Indeed, 32 female respondents preferred female gendered razors (66.7%), while only 7 preferred male gendered alternatives (14.6%). The last 9 women did not show any preference for either product (18.8%). Men, on the other hand, were significantly keener in preferring male gendered razors. Results show that 42 male respondents preferred male gendered razors (87.5%). Similarly to the previous observations, none of the male respondents showed a preference for female gendered razors (0.0%), while 6 did not have any preference (12.5%). The remaining 3 non-binary respondents had a preference for each of the three options.

Pearson's chi-squared test further rejected the null hypothesis that gender and packaging preferences were unrelated (see Appendix B: Table 91). The p-value confirmed that the relation between the variables was statistically significant, X^2 (4, n = 99) = 58.59, p < .001 (Cremonezi, 2018). The bar chart confirms that men significantly preferred male gendered razors, while women had a considerable preference for female gendered alternatives (see Figure 2). This suggests that both men and women preferred razors corresponding to their gender norms. Yet, a small number of female respondents had a preference for male gendered packaging, while men did not show any preference for female gendered razors.

The relation between gender and preferences for neutral and male gendered razors was displayed in a final consistency table (see Appendix B: Table 92). The outcome suggests that, in the case of razors, women had a clear preference for neutral gendered packaging. Results reveal that a majority of 28 female respondents preferred neutral gendered razors (58.3%). Only 7 female respondents preferred male gendered options (14.6%), whereas the remaining 13 women did not show any preference for either packaging (27.1%). In contrast, men had a considerable preference for male gendered razors. As a matter of fact, 29 male respondents opted for male gendered packaging (60.4%), while another group of 9 men preferred neutral gendered alternatives (18.8%). The final 10 male respondents did not have any preference (20.8%). The non-binary respondents had a slight preference for male razors, but this sample was too small to be significant.

Pearson's chi-squared test was further performed to examine statistical significance (see Appendix B: Table 93). The p-value rejected the null hypothesis that gender and packaging preferences for razors were unrelated, X^2 (4, n = 99) = 25.49, $p < .001$. The bar chart confirms that men had a significant preference for male gendered packaging, while women showed a preference for neutral gendered razors instead (see Figure 3).

Figure 1: Neutral-gendered Razors vs. Female-gendered Razors
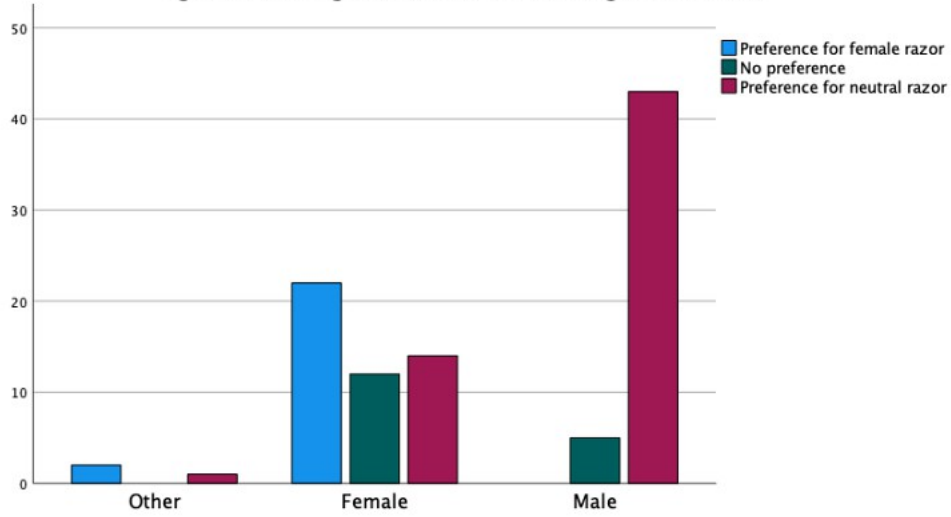
Figure 2: Female-gendered Razors vs. Male-gendered Razors
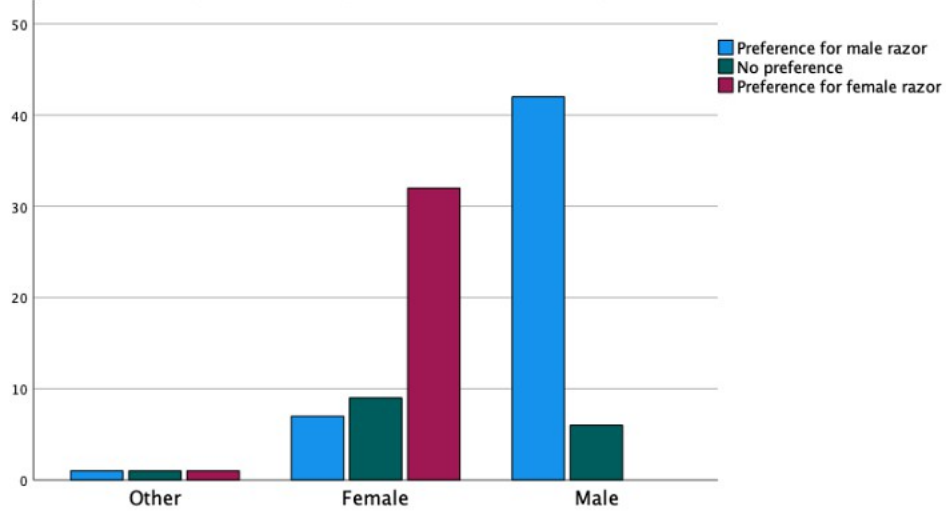
Figure 3: Neutral-gendered Razors vs. Male-gendered Razors
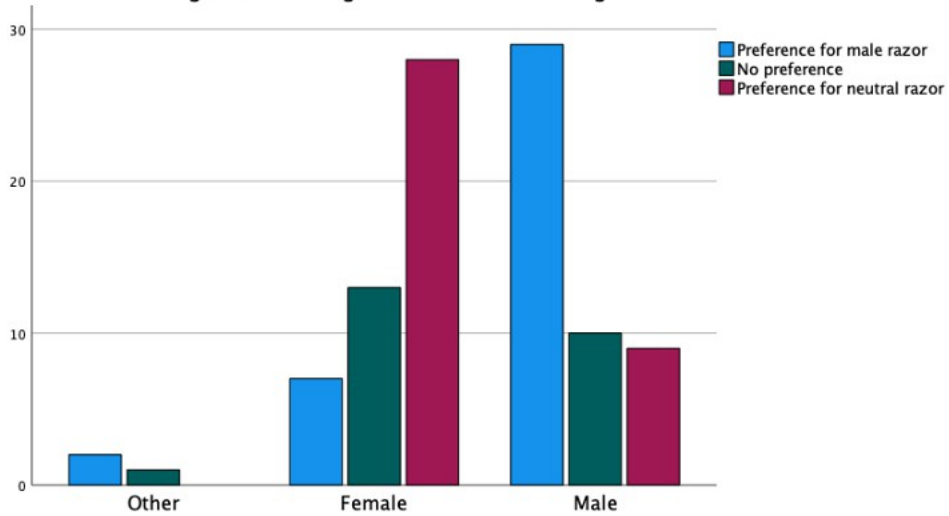
On the basis of the previous consistency tables, the first hypothesis of this research which presumes that women have a preference for female gendered razors compared to neutral gendered razors is confirmed (H1). Overall, women were found to prefer packaging with colours and labelling that corresponded to female gendered norms instead of neutral gendered alternatives. Both options mainly differentiated in packaging, but were essentially composed of similar components. Female gendered razors were pink, while neutral gendered razors were grey. Additionally, female gendered razors were labelled "For women", as opposed to neutral gendered alternatives that did not present any labelling. The outcome confirmed that, in the case of razors, women were sensitive to female gendered colours and labelling. However, findings reveal that women were also disposed to buy neutral gendered alternatives. These results are interesting, considering that neutral gendered razors are rarely commercialised. As a matter of fact, razors are highly gendered products that can mainly be found in either pink or blue colours on the market. As a consequence, women's disposition for buying neutral gendered razors might result from the fact that these products are unconventional and represent a form of newness.

Similarly, the second hypothesis that women prefer female gendered razors in comparison with male gendered razors was confirmed (H2). It appears that women had, once again, a clear preference for razors that met female gendered standards. Yet, the consistency table also provides interesting information regarding a small number of female respondents that showed a preference for male gendered blue razors instead. This surprising outcome might result from the fact that women are used to price discrimination. Their responses might reflect a habit of choosing less expensive male gendered razors, although prices were, in this case, identical. Moreover, razors are personal care products that mainly vary in packaging, unlike shampoo or deodorant that also vary in components. Accordingly, women might sometimes be willing to ignore gendered standards in the case of disposable razors.

Curiously, men were found to be significantly more discouraged to prefer female gendered razors, when compared with male or neutral gendered alternatives. As a matter of fact, male respondents completely rejected the idea of buying pink razors. Marketer's main argument for justifying the pink tax is the assumption that women had a higher preference for female gendered products compared to men's preference for male gendered products. This claim, however, can thus be disputed according to the data from this survey.

5.1.2 Razors: Crossing Gender and Price Preferences

Regarding the analysis of the relation between gender and price preferences for razors, a first group of descriptive statistics was tabulated in different consistency tables. The first section covered consistency tables of paired comparisons between more expensive neutral gendered razors and cheaper female and male gendered alternatives.

The consistency table of gender and preferences between more expensive neutral gendered razors and cheaper female gendered options brought interesting results (see Appendix B: Table 94). The outcome reveals that women had a significant preference for less expensive female gendered razors. A majority of 34 female respondents preferred cheaper female gendered products (70.8%), while 7 had a preference for more expensive neutral gendered alternatives (14.6%). The last 7 female participants had no particular preference for either option (14.6%). Men, in contrast, showed a preference for more expensive neutral gendered razors. A large portion of 31 male participants indicated preferring pricier neutral gendered razors (64.6%), while only 3 preferred cheaper female gendered alternatives (6.3%). Another 14 male respondents did not have a specific preference for either product (29.2%). Results for the group of non-binary participants were not significant, as the 3 participants each selected a different option.

Pearson's chi-squared test further rejected the null hypothesis that gender and price preferences were unrelated, X^2 (4, n = 99) = 43.83, p < .001 (see Appendix B: Table 95). In conformity, the bar chart illustrates that women had a preference for cheaper female gendered razors, while men showed a tendency for preferring more expensive neutral gendered options instead (see Figure 4).

By way of comparison, the consistency table between more expensive neutral gendered razors and less expensive male gendered versions was considered (see Appendix B: Table 96). Contrary to expectations, results reveal that women had a significant preference for cheaper male gendered razors. Half of the female sample opted for less expensive male gendered razors (50.0%), whereas a quarter preferred more expensive neutral gendered razors (25.0%). The last quarter of female participants did not have any preference for either option (25.0%). Similarly, men showed a preference for cheaper male gendered versions. A large portion of 39 male respondents opted for less expensive male gendered razors (81.3%), while only 3 had a preference for more expensive neutral gendered alternatives (6.3%). Another 6 male respondents did not manifest any

preference (12.5%). Finally, the group of non-binary respondents had a preference for less expensive male gendered razors. However, this sample was too small to be considered as significant for the present research.

A chi-squared test was further performed to examine the relation between gender and price preference in matters of razors (see Appendix B: Table 97). The p-value rejected the null hypothesis that gender and price preferences were unrelated, X^2 (4, n = 99) = 12.69, p < .05. The bar chart confirms that both female and male respondents preferred cheaper male gendered razors, although an important number of women showed a preference for more expensive neutral gendered options instead (see Figure 5).
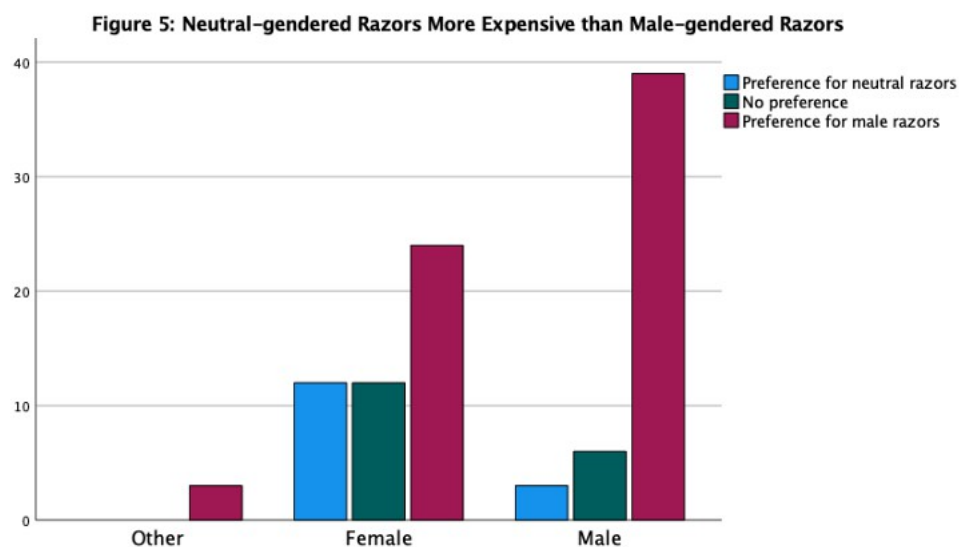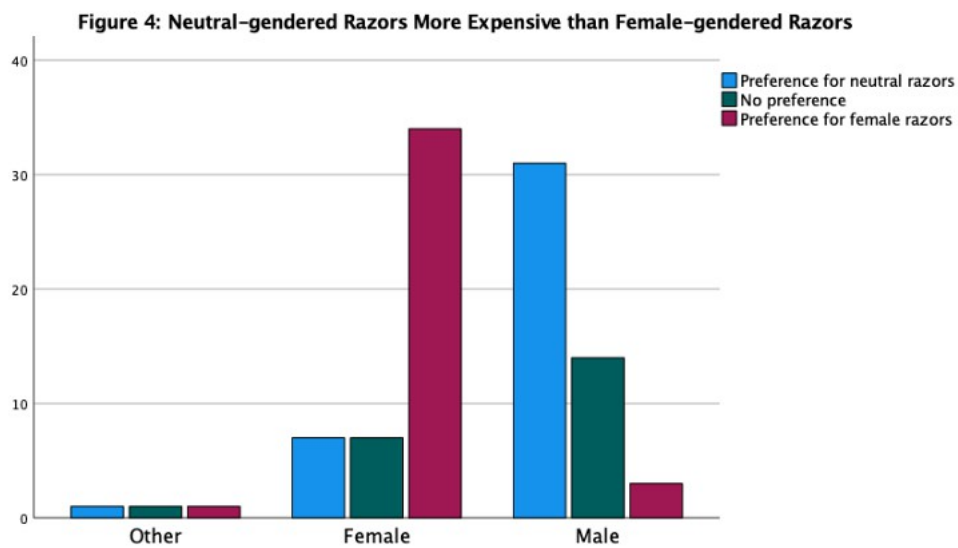
Figure 4: Neutral–gendered Razors More Expensive than Female–gendered Razors

Figure 5: Neutral–gendered Razors More Expensive than Male–gendered Razors

As a second step, descriptive statistics of the relation between gender and price preferences for razors were tabulated in consistency tables covering paired comparisons between cheaper neutral gendered razors and more expensive female and male gendered versions.

The first consistency table covered cheaper neutral gendered razors and more expensive female gendered options (see Appendix B: Table 98). Findings suggest that women had an obvious preference for less expensive neutral gendered razors. It appears that 30 female respondents preferred cheaper neutral gendered razors (62.5%), while 6 opted for more expensive female gendered alternatives (12.5%). Another group of 12 female participants did not reveal any preference for either option (25.0%). In the same way, men also largely preferred less expensive neutral gendered razors. A significant number of 43 male respondents opted for cheaper neutral gendered razors (89.6%), while none of them chose more expensive female gendered alternatives (0.0%). The remaining 5 male respondents did not show any particular preference (10.4%). The outcome for the group of non-binary participants did not bring conclusive results, also considering that the 3 participants all selected a different option.

Pearson's squared test further examined the relation between gender and price preferences for razors (see Appendix B: Table 99). The p-value rejected the null hypothesis that these variables were unrelated, X^2 (4, n = 99) = 14.58, p < .01. The bar chart illustrates that both men and women opted for less expensive neutral gendered razors when compared with more expensive female gendered options (see Figure 6).

Regarding cheaper neutral gendered razors in comparison with more expensive male gendered razors, the consistency table brought interesting results (see Appendix B: Table 100). Women were largely in favour of less expensive neutral gendered razors. A significant number of 37 female respondents showed a preference for cheaper neutral gendered versions (77.1%), while 3 liked pricier male gendered options better (6.3%). The remaining 8 female respondents had no preference for either version (16.7%). Similarly, men mainly opted for cheaper neutral gendered razors. A majority of 22 male participants preferred less expensive neutral gendered razors (45.8%), whereas 11 indicated preferring more expensive male gendered alternatives instead (22.9%). The last portion of 15 male participants had no specific preference (31.3%). The non-binary respondents showed a slight preference for more expensive male gendered razors.

Pearson's chi-squared test rejected the null hypothesis that gender and price preferences for razors were unrelated, X^2 (4, n = 99) = 17.00, p < .01 (see Appendix B: Table 101). Although the bar chart confirms that both men and women prefer cheaper neutral gendered razors over more expensive male gendered versions, it illustrates that a large number of male respondents opted for pricier male gendered razors instead (see Figure 7).

Figure 6: Neutral-gendered Razors Less Expensive than Female-gendered Razors
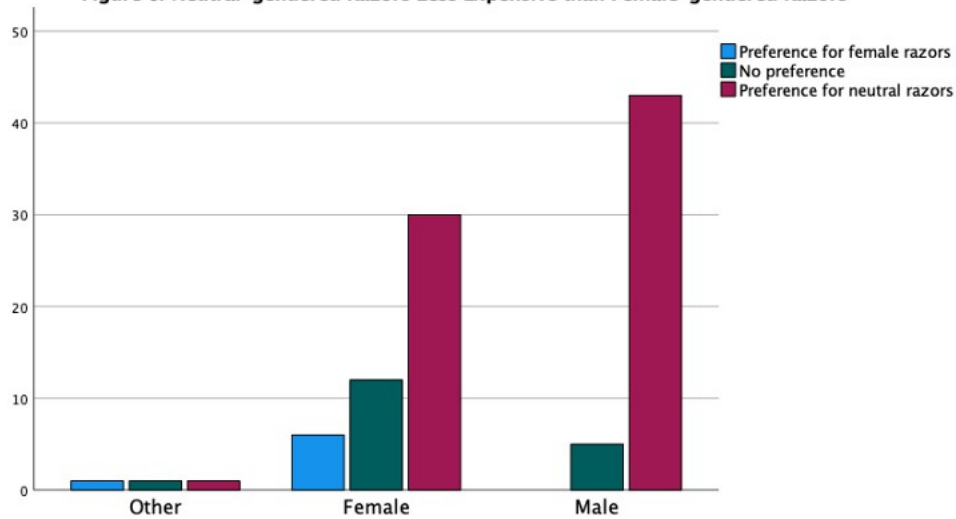
Figure 7: Neutral-gendered Razors Less Expensive than Male-gendered Razors
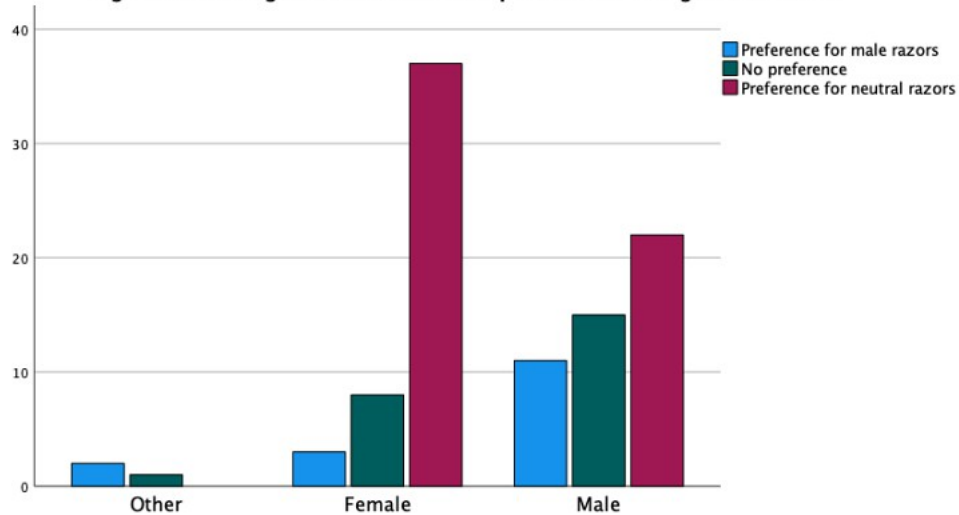
Final consistency tables were performed to analyse the relation between gender and price preferences for razors. Descriptive statistics were tabulated for pairs of female and male gendered razors varying in price.

Price preferences between more expensive female gendered razors and cheaper male gendered alternatives were first analysed (see Appendix B: Table 102). Statistics reveal that women had a slight preference for cheaper male gendered razors. Results suggest that a significant number of 20 female respondents preferred less expensive male gendered razors (41.7%), while 15 opted for more expensive female gendered alternatives (31.3%). The remaining 13 female respondents had no particular preference for either option (27.1%). In the same vein, men significantly preferred cheaper male gendered razors. A large number of 46 male participants had a preference for less expensive male gendered options (95.8%), while none of them opted for pricier female gendered alternatives (0.0%). The remaining 2 male participants had no preference (4.2%). The non-binary respondents were slightly in favour of cheaper male gendered razors. Yet, this number was too small to be significant.

Based on Pearson's chi-squared test, the null hypothesis that gender and price preferences in matters of razors were unrelated was rejected, X^2 (4, n = 99) = 34.55, $p < .001$ (see Appendix B: Table 103). Although the bar chart confirms that both men and women prefer cheaper male gendered razors over pricier female gendered options, a considerable number of female participants still opted for more expensive versions instead (see Figure 8). Men, however, were more resistant in preferring this option.

The final section covers the consistency tables crossing gender with preferences between less expensive female gendered razors and more expensive male gendered alternatives (see Appendix B: Table 104). Women presented a significant preference for cheaper female gendered razors. A significant majority of 42 female respondents preferred less expensive female gendered products (87.5%), while 2 preferred pricier male gendered razors (4.2%). The remaining 4 female respondents did not show any preference for either option (8.3%). In contrast, men largely preferred more expensive male gendered razors. As a matter of fact, 33 male respondents indicated preferring pricier male gendered options (68.8%), and only 4 opted for cheaper female gendered razors instead (8.3%). The last 11 male participants had no preference (22.9%). The 3 non-binary participants had a preference for each of the three options, although this sample was not significant.

A final chi-squared test was performed to observe the relation between gender and price preference in matters of razors (see Appendix B: Table 105). The p-value rejected the null hypothesis that both variables were unrelated, X^2 (4, n = 99) = 63.07, p < .001. The bar chart illustrates that women had a preference for cheaper female gendered razors, while men preferred paying more for razors with male gendered packaging (see Figure 9).

Figure 8: Female–gendered Razors More Expensive than Male–gendered Razors
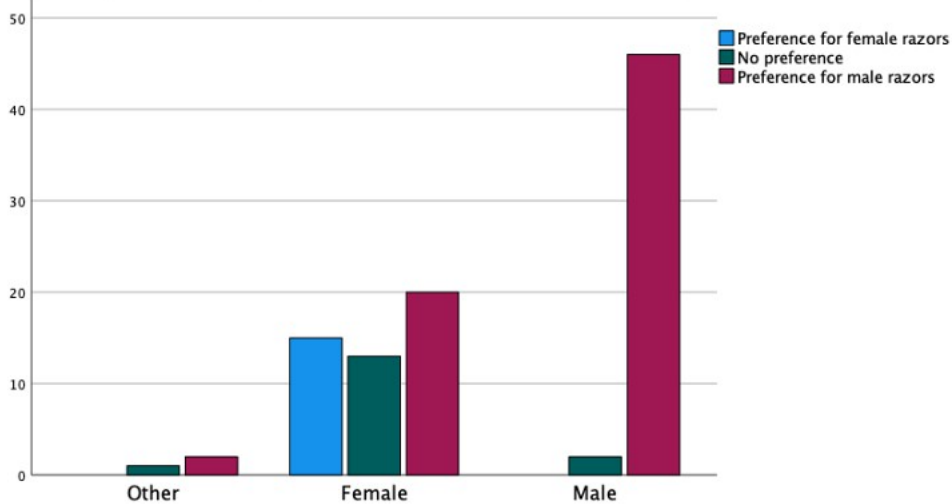
Figure 9: Female–gendered Razors Less Expensive than Male–gendered Razors
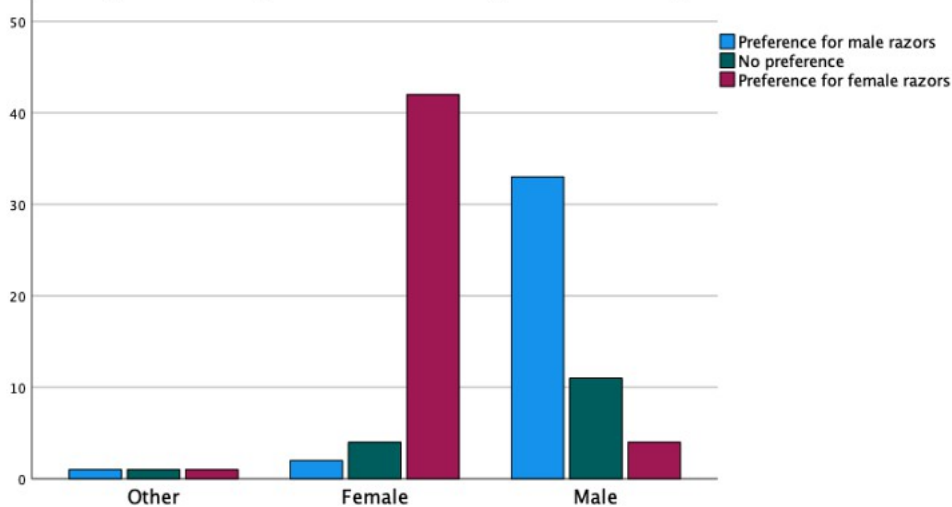
Based on the conclusions above, the hypothesis that female consumers are willing to pay more for female gendered razors compared to cheaper neutral gendered options is rejected (H3). Although women preferred female gendered packaging in comparison to neutral gendered alternatives, it appears that their preferences vary when prices are not identical. Indeed, women tend to prefer neutral gendered razors when these are cheaper than female gendered options. This suggests that, in the case of razors, women are more sensitive to the price feature of the product than they are to the packaging.

Along the same lines, the hypothesis that female consumers are willing to pay more for female gendered razors compared to cheaper male gendered options is also rejected (H4). Women are found to slightly prefer less expensive male gendered razors when compared with more expensive female gendered options. These conclusions are interesting, considering that women were largely discouraged to purchase male gendered razors when prices were identical to female gendered packaging. Once again, it seems that women are more sensitive to price than to packaging in the case of razors.

Given that both hypotheses are rejected, the general assumption that women have a higher willingness to pay for female gendered razors is contested. Women are found to be slightly more sensitive to price, while men appear to be significantly more sensitive to packaging. More interestingly, statistics reveal that men actually present a higher willingness to pay for male gendered razors. This implies that men attribute a higher value to male gendered packaging for razors. These findings are conclusive for the present study, as they question previous research supporting that women tend to be willing to pay more than men for identical products (Mitchell & Walsh, 2004; Bakewell & Mitchell, 2006). The present conclusions confirm that female and male consumers differ in the value they attribute to gendered packaging. However, with respect to the law of demand, price discrimination on a segment of consumers can only be justified if that particular segment has a higher willing to pay for a specific product. Considering that men are found to have a higher willingness to pay for male gendered razors than women for female gendered alternatives, a price discrimination can only be justified on the segment of male consumers. Based on the present results, the pink tax that is applied to razors could be considered as a form of gender discrimination rather than a simple form of price discrimination. These accusations are all the more serious bearing in mind that disposable razors present strong price variations between female and male gendered options. As mentioned earlier, female gendered razors are found to be 11.0% more expensive than

male gendered options (DCA, 2015). Moreover, both products mainly diverged in colour and labelling, but were essentially composed of similar components.

5.2   Feature Preferences: Shampoo

5.2.1 Shampoo: Crossing Gender and Packaging Preferences

In order to analyse the relation between gender and packaging preferences in the case of shampoo, descriptive statistics were tabulated in consistency tables for the different pairs of packagings: pairs of neutral and female gendered shampoo, pairs of female and male gendered shampoo, and pairs of neutral and male gendered shampoo. Results for each consistency table were further illustrated with the help of bar charts.

The first consistency table presented the data gathered from the relation between gender and packaging preferences in the case of neutral gendered shampoo when compared with female gendered alternatives (see Table 106). Overall, results suggest that women liked female gendered shampoo just as much as neutral gendered alternatives. It appears that the same number of 19 female participants either opted for female gendered shampoo (38.8%), or for neutral gendered alternatives (38.8%). The remaining 11 female participants had no preference for either option (22.4%). In contrast, men had a significant preference for neutral gendered shampoo when compared with female gendered alternatives. A total of 39 male respondents indicated preferring neutral gendered packaging (81.3%), while only 1 preferred female gendered options instead (2.1%). The remaining 8 male respondents had no specific preference (16.7%). The single non-binary respondent finally showed a preference for neutral gendered shampoo. Yet, this sample was too small to ensure accuracy.

Table 106: Crosstabulation Gender * Neutral-gendered Shampoo vs. Female-gendered Shampoo

			Packaging			
			Female Shampoo	No preference	Neutral Shampoo	Total
Gender	Other	Count	0	0	1	1
		%	0,0%	0,0%	100,0%	100,0%
	Female	Count	19	19	11	49
		%	38,8%	38,8%	22,4%	100,0%
	Male	Count	1	8	39	48
		%	2,1%	16,7%	81,3%	100,0%
Total		Count	20	27	51	98
		%	20,4%	27,6%	52,0%	100,0%

The given data was further submitted to a chi-squared test (see Table 107). The p-value rejected the null hypothesis that gender and packaging preferences were unrelated, X^2 (4, n = 98) = 37.34, p < .001 (Cremonezi, 2018). The bar chart confirms that women had an equal preference for neutral and female gendered packaging, while men showed a significant preference for neutral gendered options instead (see Figure 10).

Table 107: Chi-Square Tests Neutral vs. Female Shampoo Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	37,339[a]	4	,000
Likelihood Ratio	42,329	4	,000
Linear-by-Linear Association	29,346	1	,000
N of Valid Cases	98		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,20.

Another consistency table was performed to analyse the relation between gender and preferences for female and male gendered packaging in the case of shampoo (see Appendix B: Table 108). Women were found to significantly prefer female gendered shampoo when compared with male gendered alternatives. Results show that 41 female participants indicated preferring female gendered packaging (83.7%), while only 3 were in favour of male gendered options (6.1%). The remaining 5 female respondents had no specific preference for either option (10.2%). In contrast, men showed an obvious preference for male gendered packaging. It appears that 36 male respondents preferred male gendered shampoo (75.0%), while only 2 had a preference for female gendered options instead (4.2%). Another 10 male respondents had no specific preference for either option (20.8%). The single non-binary respondent finally had a preference for male gendered product, although this number was too small to provide determinant conclusions for the present research.

Based on Pearson's chi-squared tests, the null hypothesis that the variables of gender and shampoo packaging were unrelated was rejected, X^2 (4, n = 98) = 66.37, p < .001 (see Appendix B: Table 109). Consistently, the bar chart illustrates that both men and women showed a tendency for preferring packaging that are designed to respond to their respective gender norms (see Figure 11).

Gender and preferences for neutral and male gendered packaging for shampoo were compared through a final consistency table (see Appendix B: Table 110). The outcome reveals that a majority of women had a preference for neutral gendered packaging. Results reveal that 39 of the female respondents opted for neutral gendered options (79.6%), while 2 preferred male gendered shampoo (4.1%). The last group of 8 female participants had no preference (16.3%). In contrast, men were less determined. As follows, 19 male respondents did not show any preference for either option (39.6%). Another 15 preferred male gendered shampoo (31.3%), while 14 favoured neutral gendered shampoo instead (29.2%). The remaining 1 non-binary respondent had a preference for neutral gendered shampoo. However, this sample was too small to be conclusive.

Pearson's chi-squared tests further rejected the null hypothesis that gender and packaging preference were unrelated, X^2 (4, n = 98) = 27.09, p < .001 (see Appendix B: Table 111). In point of fact, the bar chart confirms that women preferred neutral gendered shampoo when compared with male gendered options. In contrast, men had a tendency for opting for the "No preference" option (see Figure 12).

Figure 10: Neutral-gendered Shampoo vs. Female-gendered Shampoo

Legend:
- Preference for female shampoo
- No preference
- Preference for neutral shampoo
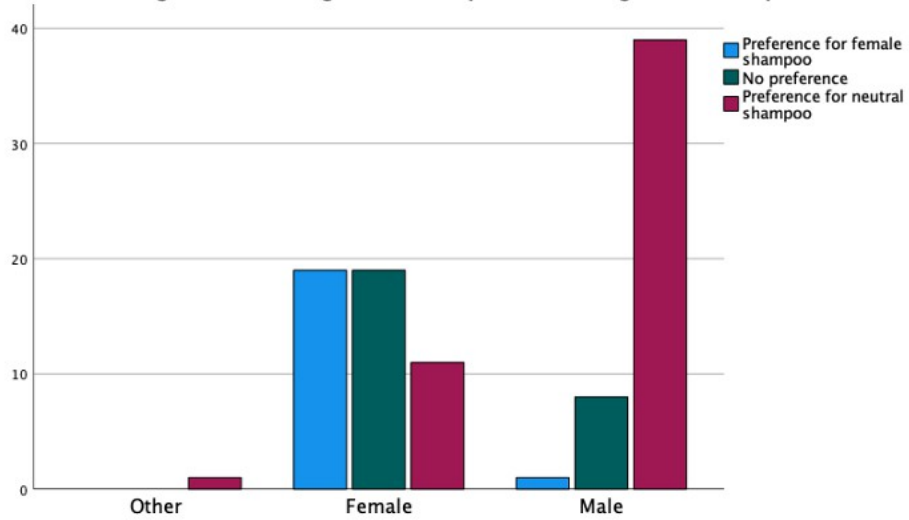
Figure 11: Female-gendered Shampoo vs. Male-gendered Shampoo

Legend:
- Preference for male shampoo
- No preference
- Preference for female shampoo
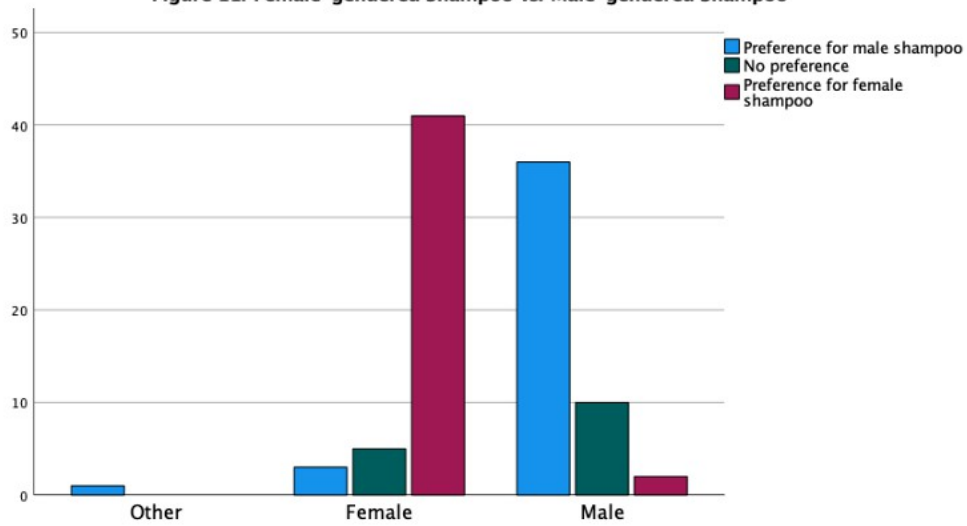
Figure 12: Neutral-gendered Shampoo vs. Male-gendered Shampoo

Legend:
- Preference for male shampoo
- No preference
- Preference for neutral shampoo
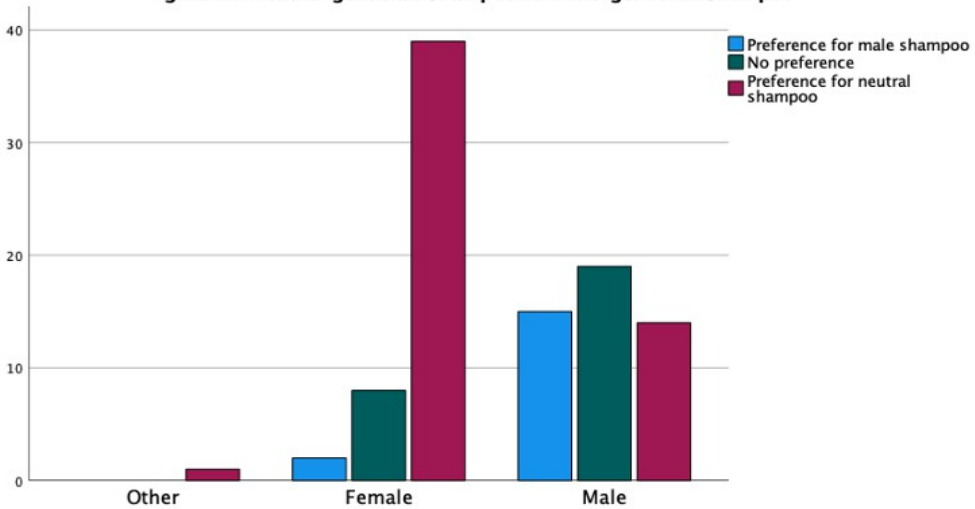
Results presented above provide interesting conclusions about female and male preferences regarding packaging for shampoo. The outcome rejects the hypothesis of this research presuming that female consumers have a preference for female gendered shampoo compared to neutral gendered shampoo (H5). Overall, women had an equal preference for the packaging that corresponded to female-gendered standards and the one that included more neutral gendered elements. The two options mainly varied in colours and labelling. Female gendered products had pink colours with female labelling. In contrast, neutral gendered alternatives presented grey colours and did not include labels. Findings demonstrate that women were not particularly sensitive to female gendered colours and labelling, as they were equally disposed to purchase neutral gendered alternatives. The outcome can be relatable, considering that neutral and female gendered shampoo are hardly distinguishable from each other, and are generally presented on the same shelves in the supermarket. Accordingly, women's equal disposition for purchasing neutral and female gendered shampoo can result from their natural consumption habit to not pay attention to female labelling, since labelling rarely exists in the case of female and neutral gendered shampoo.

On the other hand, the hypothesis presuming that female consumers have a preference for female gendered shampoo compared to male gendered shampoo is confirmed (H6). Conclusions reveal that women had a significant preference for shampoo that corresponded to female gendered norms. Women are found to be more sensitive to labelling and colours, when they have to choose between labels indicating "Women" or "Men" on shampoo.

Last but foremost, male consumer preferences were surprisingly similar to female consumer preferences. Men were found to have no significant preference for either option between male and neutral gendered shampoo. Along the same lines, men showed a clear preference for packaging corresponding to male gendered norms when compared with female gendered options. Colours and labelling only had an impact when presented in pairs of female and male gendered shampoo. Yet, a significant number of male respondents opted for the "No preference" option. This might result from the fact that all three packagings of shampoo systematically presented the word "Volume". Indeed, male shampoo is mainly labelled under male gendered traits, such as "Power" or "Strong". This might suggest that the label modifications for male gendered shampoo were not consistent with male gendered norms.

5.2.2 Shampoo: Crossing Gender and Price Preferences

The relation between gender and price preferences in the case of shampoo was further analysed by means of consistency tables. Descriptive statistics for paired comparisons of more expensive neutral gendered shampoo and cheaper female and male gendered alternatives were first tabulated in consistency tables.

The first consistency table covered gender and preferences between more expensive neutral gendered shampoo and cheaper female gendered alternatives (see Appendix B: Table 112). Overall, women preferred less expensive female gendered shampoo. A significant number of 35 female respondents opted for cheaper female gendered products (71.4%), while 9 preferred more expensive neutral gendered shampoo instead (18.4%). The remaining 5 female respondents had no preference (10.2%). Men, however, showed a preference for more expensive neutral gendered shampoo. Results reveal that 26 male respondents preferred pricier neutral gendered options (54.2%), while 11 opted for cheaper female gendered alternatives (22.9%). Another 11 male participants indicated not having any preferences (22.9%). The remaining 1 non-binary participant opted for more expensive neutral gendered shampoo. However, the sample of non-binary respondents was too small to bring significant results.

Statistical significance was further tested through a chi-squared test (see Appendix B: Table 113). The p-value rejected the null hypothesis that gender and price preferences for shampoo were unrelated, X^2 (4, n = 98) = 24.76, p < .001. As a matter of fact, the bar chart illustrates that women had a preference for cheaper female gendered shampoo, while men preferred opting for more expensive neutral gendered alternatives instead (see Figure 13).

Regarding the impact of gender on preferences between more expensive neutral gendered shampoo and cheaper male gendered versions, the consistency table provides interesting insights (see Appendix B: Table 114). Women were found to prefer more expensive neutral gendered shampoo. A large portion of 32 female respondents had a preference for pricier neutral gendered shampoo (65.3%), while 10 opted for cheaper male gendered options instead (20.4%). The remaining 7 female participants had no preference (14.3%). On the other hand, men were considerably more in favour of cheaper male gendered shampoo. Indeed, 30 male respondents had a preference for less expensive male gendered shampoo (62.5%), whereas 5 preferred pricier neutral gendered alternatives (10.4%). The remaining group of 13 male participants had no preference

(27.1%). Finally, the 1 non-binary respondent had a preference for more expensive neutral-gendered shampoo, although this small number was irrelevant for the present study.

Pearson's chi-squared test rejected the null hypothesis that gender and price preferences in matter of shampoo were unrelated, X^2 (4, n = 98) = 32.91, p < .001 (see Appendix B: Table 115). Overall, the bar chart illustrates that women preferred more expensive neutral gendered shampoo, while men had a preference for cheaper male gendered versions (see Figure 14).

Figure 13: Neutral–gendered Shampoo More Expensive than Female–gendered Shampoo
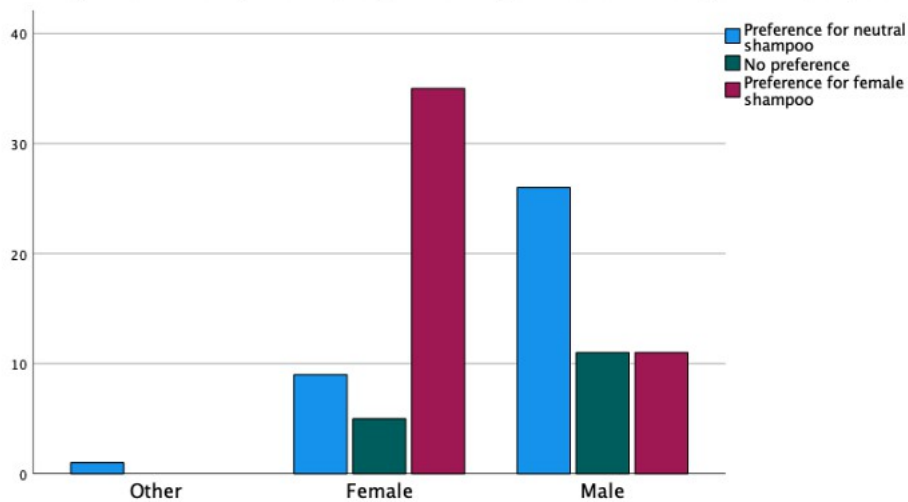
Figure 14: Neutral–gendered Shampoo More Expensive than Male–gendered Shampoo
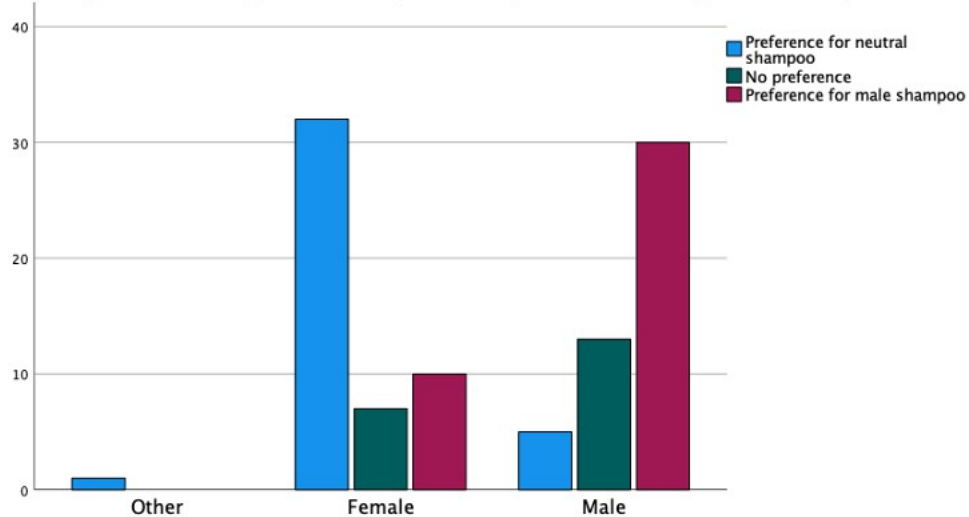
Descriptive statistics were further tabulated in consistency tables to analyse the relation of gender and price preferences for paired comparisons between cheaper neutral gendered shampoo and more expensive female and male gendered alternatives.

The first section covered descriptive statistics of gender crossed with preferences between cheaper neutral gendered shampoo and more expensive female gendered alternatives (see Appendix B: Table 116). Based on the consistency table, women show a preference for cheaper neutral gendered shampoo. Findings suggest that a majority of 29 female respondents preferred less expensive neutral gendered shampoo (59.2%), while only 8 opted for pricier female gendered alternatives (16.3%). Another 12 female respondents had no preference for either option (24.5%). In the same vein, men were found to significantly prefer cheaper neutral gendered shampoo. A large portion of 45 male participants indicated preferring less expensive neutral gendered shampoo (93.8%), while none of them opted for more expensive female gendered versions (0.0%). The remaining 3 male respondents did not indicate any preference for either product (6.3%). The 1 non-binary participant opted for cheaper neutral gendered shampoo. This number, however, was too small to be conclusive.

The application of Pearson's chi-squared test further rejected the null hypothesis that gender and price preference were unrelated, X^2 (4, n = 98) = 17.28, $p < .01$ (see Appendix B: Table 117). The bar chart confirmed that both men and women preferred cheaper neutral gendered shampoo when compared with more expensive female gendered versions (see Figure 15). However, a small number of female respondents opted for more expensive female gendered shampoo, while none of the male participants preferred these options.

The consistency table crossing gender and preferences between less expensive neutral gendered shampoo and more expensive male gendered options further brought interesting results (see Appendix B: Table 118). Overall, women significantly preferred cheaper neutral gendered shampoo. A large portion of 45 female participants had a preference for less expensive neutral gendered shampoo (91.8%), while only 1 opted for more expensive male gendered alternatives (2.0%). The final 3 female respondents had no particular preference between both (6.1%). Men were similarly found to prefer less expensive neutral gendered shampoo. A majority of 34 male respondents showed a preference for cheaper neutral gendered products (70.8%), while 5 preferred male gendered shampoo with a

higher price (10.4%). Another 9 male participants did not show any preference for either option (18.8%). The remaining 1 non-binary participant also had a preference for cheaper neutral gendered shampoo, although this observation was irrelevant for the present study.

Pearson's chi-squared test further examined the relation between gender and price preferences in the case of shampoo (see Appendix B: Table 119). The p-value revealed a non-significant trend in the predicted direction indicating a preference for both genders for less expensive male gendered shampoo in comparison with more expensive neutral gendered alternatives, X^2 (4, n = 98) = 7.47, p = .113. The bar chart confirms that both men and women showed similar preferences by opting for less expensive neutral gendered shampoo instead of pricier male gendered versions (see Figure 16).

Figure 15: Neutral–gendered Shampoo Less Expensive than Female–gendered Shampoo

Figure 16: Neutral–gendered Shampoo Less Expensive than Male–gendered Shampoo
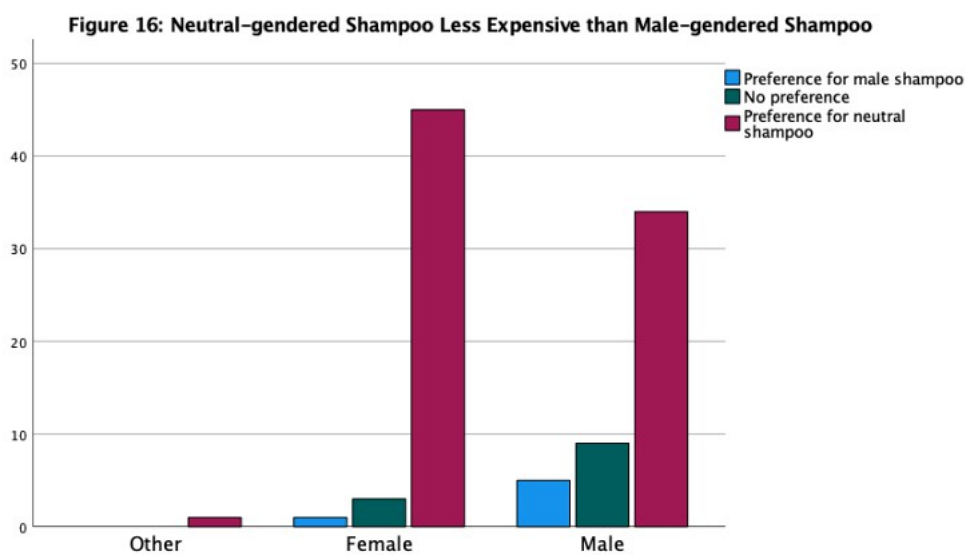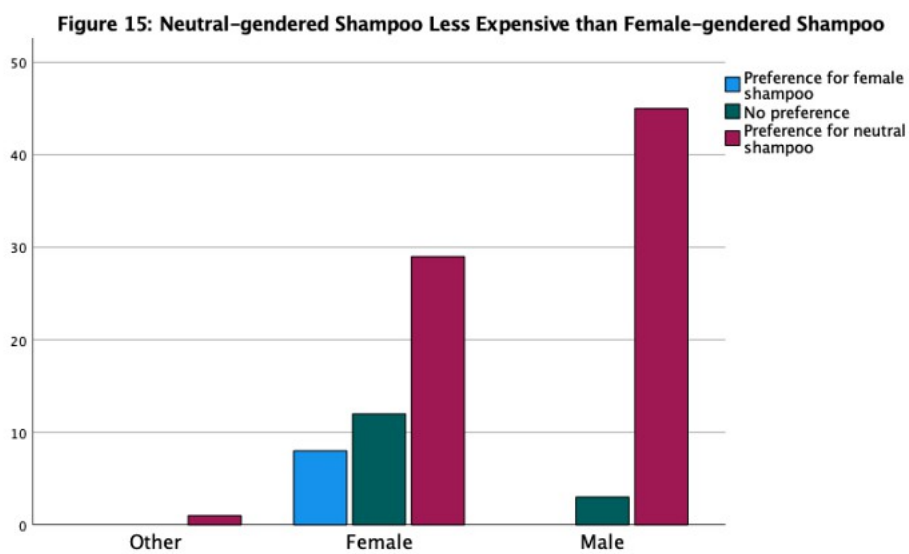
The final section analysed the relation between gender and price preferences for shampoo for paired comparisons of female and male gendered shampoo varying in price. Descriptive statistics were tabulated in different consistency tables.

A consistency table crossing gender and preferences between more expensive female gendered shampoo and cheaper male gendered options was first performed (see Appendix B: Table 120). It appears that women had a preference for more expensive female gendered shampoo. A significant number of 30 female respondents indicated preferring pricier female gendered options (61.2%), while only 8 opted for cheaper male gendered versions instead (16.3%). Another 11 female participants had no particular preference (22.4%). On the other hand, men showed a clear preference for cheaper male gendered shampoo. A majority of 40 male participants indicated preferring less expensive male gendered products (83.3%), while none of them opted for pricier female gendered alternatives (0.0%). The remaining 8 male respondents did not show any preference (16.7%). The 1 non-binary respondent opted for less expensive male gendered options. However, this number was too small to be relevant for this research.

Pearson's chi-squared test rejected the null hypothesis that gender and price preferences for shampoo were unrelated, X^2 (4, n = 98) = 52.89, p < .001 (see Appendix B: Table 121). In conformity with previous observations, the bar chart illustrates that women tended to prefer more expensive female gendered shampoo, while men preferred cheaper male gendered alternatives (see Figure 17).

The last consistency table for shampoo crossed gender and preferences between cheaper female gendered shampoo and more expensive male gendered alternatives (see Appendix B: Table 122). The outcome reveals that women mainly opted for less expensive female gendered shampoo. It appears that 44 female respondents preferred cheaper female gendered options (89.8%), instead of pricier male gendered products, which only 3 preferred (6.1%). The remaining 2 female participants had no preference for either option (4.1%). However, men were in favour of more expensive male gendered shampoo. As a matter of fact, 28 male respondents had a preference for male gendered shampoo (58.3%), even if they were more expensive than female gendered versions. A small number of 9 male respondents preferred cheaper female gendered shampoo (18.8%), while 11 had no preference (22.9%). The final 1 non-binary participant preferred more expensive male gendered options. Yet this number was too small to be significant.

Statistical significance was further confirmed through Pearson's chi-squared test, rejecting the null hypothesis that gender and price preference were unrelated, X^2 (4, n = 98) = 51.44, p < .001 (see Appendix B: Table 123). The bar chart illustrates that women tended to prefer cheaper female gendered shampoo, while men opted for more expensive male gendered shampoo (see Figure 18).

Figure 17: Female-gendered Shampoo More Expensive than Male-gendered Shampoo

Figure 18: Female-gendered Shampoo Less Expensive than Male-gendered Shampoo
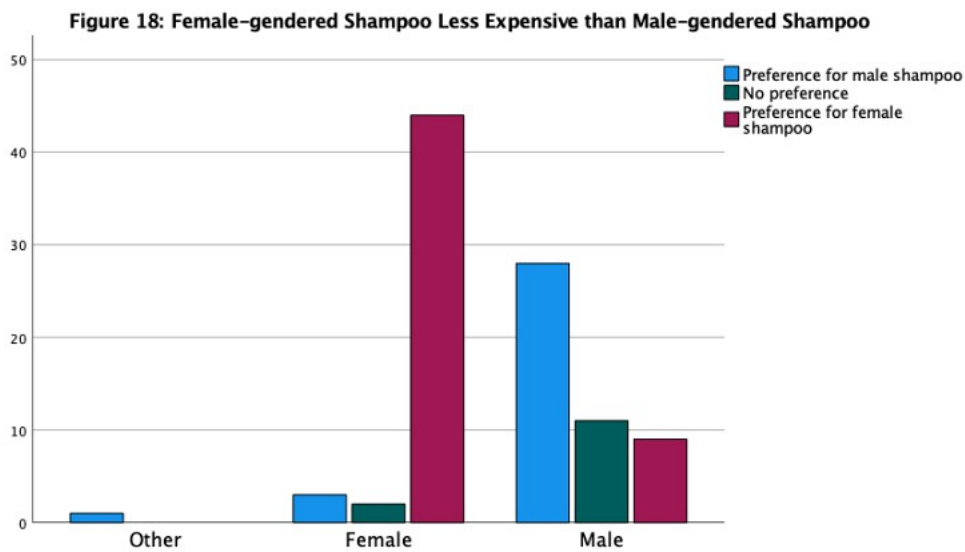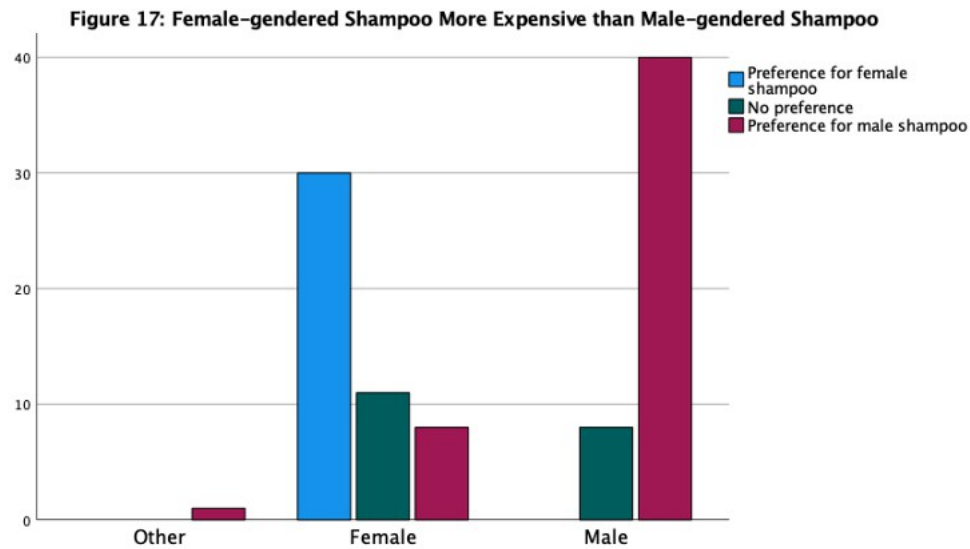
The present conclusions reject the hypothesis presuming that female consumers are willing to pay more for female gendered shampoo compared to cheaper neutral gendered shampoo (H7). The overall outcome reveals that, in the case of shampoo, women have a preference for less expensive neutral gendered shampoo when compared with pricier female gendered alternatives. These findings are consistent with the expectations resulting from the previous conclusions indicating that women did not have a particular preference for female gendered packaging in comparison with neutral gendered versions for shampoo. This implies that, regarding shampoo, women are more sensitive to price than to packaging.

In contrast, the hypothesis presuming that women are willing to pay more for female gendered shampoo compared to cheaper male gendered shampoo is confirmed (H8). Women are found to prefer more expensive female gendered shampoo when compared with cheaper male gendered options. These conclusions are in conformity with the previous results suggesting that women prefer female gendered packaging for shampoo compared to male gendered packaging. It appears that women are more sensitive to packaging than price in the case of shampoo when compared with male gendered alternatives.

The outcome regarding male consumer preferences provides similar conclusions. Findings suggest that men were more sensitive to price regarding paired comparisons between less expensive neutral gendered shampoo and pricier male gendered options. Accordingly, men had a preference for cheaper neutral gendered shampoo when compared with more expensive male gendered alternatives. Similarly, male consumers were more sensitive to packaging when compared with female gendered shampoo. Results show that male respondents had a preference for more expensive neutral gendered shampoo when compared with cheaper female gendered alternatives. Moreover, men were found to be very resistant to the idea of purchasing female gendered shampoo. The assumption that women have a higher willingness to pay for female gendered shampoo when compared with male gendered alternatives is equally true as the assumption that men have a higher willingness to pay for male gendered shampoo. The existence of price discrimination on female gendered products can once again be disputed, considering that both men and women attribute a higher value to shampoo that meets their gender norms.

5.3 Feature Preferences: Deodorant

5.3.1 Deodorant: Crossing Gender and Packaging Preferences

With the aim of analysing the relation between gender and packaging preferences for deodorant, descriptive statistics were tabulated in consistency tables for the different pairs: pairs of neutral and female gendered deodorant, pairs of female and male gendered deodorant, and pairs of neutral and male gendered deodorant. Observations for each consistency table were further illustrated by bar charts.

In the first instance, the relation between gender and preferences between neutral and female gendered packaging were measured through a consistency table (see Table 124). The outcome reveals that a majority of women showed a preference for female gendered deodorant. As a matter of fact, the descriptives indicate that 21 of the female participants had a preference for female gendered deodorant (43.8%), while 12 preferred neutral gendered deodorant (25.0%). Another 15 female respondents did not show any preference for either product (31.3%). In contrast, men manifested a significant preference for neutral gendered options. Results demonstrate that 42 of the male respondents had a preference for neutral gendered deodorant (85.7%), while none of them chose female gendered alternatives (0.0%). The remaining 7 male participants did not have a specific preference for either option (14.3%).

Table 124: Crosstabulation Gender * Neutral–gendered Deodorant vs. Female– gendered Deodorant

			Packaging			
			Female Deodorant	No preference	Neutral Deodorant	Total
Gender	Female	Count	21	15	12	48
		%	43,8%	31,3%	25,0%	100,0%
	Male	Count	0	7	42	49
		%	0,0%	14,3%	85,7%	100,0%
Total		Count	21	22	54	97
		%	21,6%	22,7%	55,7%	100,0%

Pearson's chi-squared test further rejected the null hypothesis that gender and packaging preferences were unrelated, X^2 (2, n = 97) = 40.57, $p < .001$ (see Table 125) (Cremonezi, 2018). The bar chart illustrates that, in the case of deodorant, women mainly opted for female gendered packaging when compared with neutral gendered products (see Figure 19). Yet, men did not manifest a preference for female gendered deodorant, and preferred opting for neutral gendered alternatives instead.

Table 125: Chi-Square Tests Neutral vs. Female Deodorant Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	40,570[a]	2	,000
Likelihood Ratio	49,730	2	,000
Linear-by-Linear Association	39,832	1	,000
N of Valid Cases	97		

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,39.

Gender and packaging preferences between female and male gendered deodorant were further displayed on another consistency table (see Appendix B: Table 126). Overall, women showed a significant preference for female gendered packaging in the case of deodorant. Some 40 of the female respondents had a preference for female gendered deodorant (83.3%), when compared with male gendered packaging at a similar price. An identical number of 4 female respondents either preferred male gendered packaging (8.3%), or had no preference (8.3%). On the other hand, men significantly liked male gendered deodorant better. Findings suggest that 46 of the male participants opted for male gendered deodorant (93.9%), while none preferred female gendered packaging (0.0%). The remaining 3 male respondents had no preference for either option (6.1%).

Pearson's chi-squared test rejected the null hypothesis that gender and preferences for deodorant packaging were unrelated, X^2 (2, n = 97) = 75.42, $p < .001$ (see Appendix B: Table 127). In accordance, the bar chart illustrates that women largely preferred female gendered deodorant, whereas men significantly opted for male gendered alternatives instead (see Figure 20).

The final consistency table was established between gender and packaging preferences between neutral and male gendered deodorant (see Appendix B: Table 128). Women had a preference for neutral gendered packaging. A majority of 41 female participants indicated preferring neutral gendered deodorant (85.4%), while only 2 opted for male gendered packaging instead (4.2%). A small number of 5 female respondents had no preference (10.4%). In contrast, men preferred deodorant corresponding to male gendered standards. A large group of 36 male participants favoured male gendered products (73.5%), whereas 6 opted for neutral gendered packaging (12.2%). The remaining 7 male subjects had no preference for either product (14.3%).

A chi-squared test was finally performed to test statistical significance (see Appendix B: Table 129). The p-value rejected the null hypothesis that gender and preferences for deodorant packaging were unrelated, X^2 (2, n = 97) = 56.81, p < .001. Accordingly, the bar chart illustrates that both men and women preferred deodorant packaging that corresponded to their gender norms (see Figure 21).

Figure 19: Neutral-gendered Deodorant vs. Female-gendered Deodorant
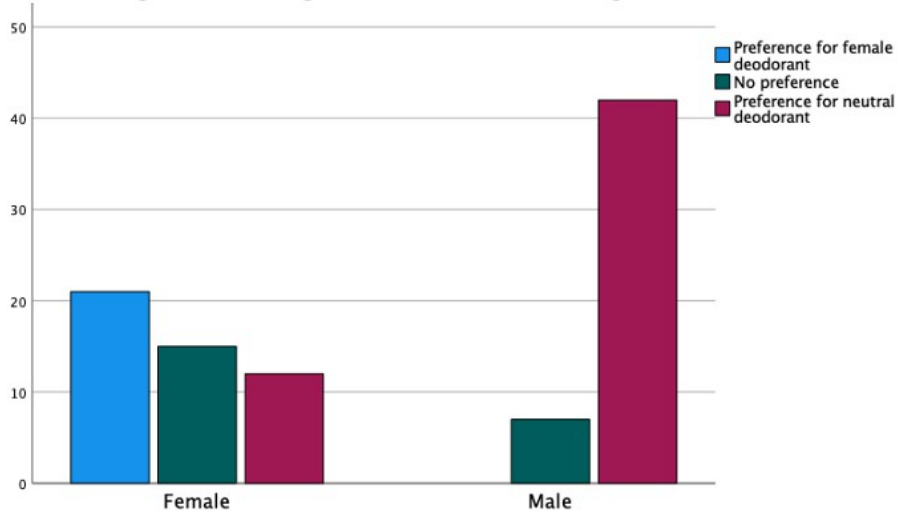
Figure 20: Female-gendered Deodorant vs. Male-gendered Deodorant
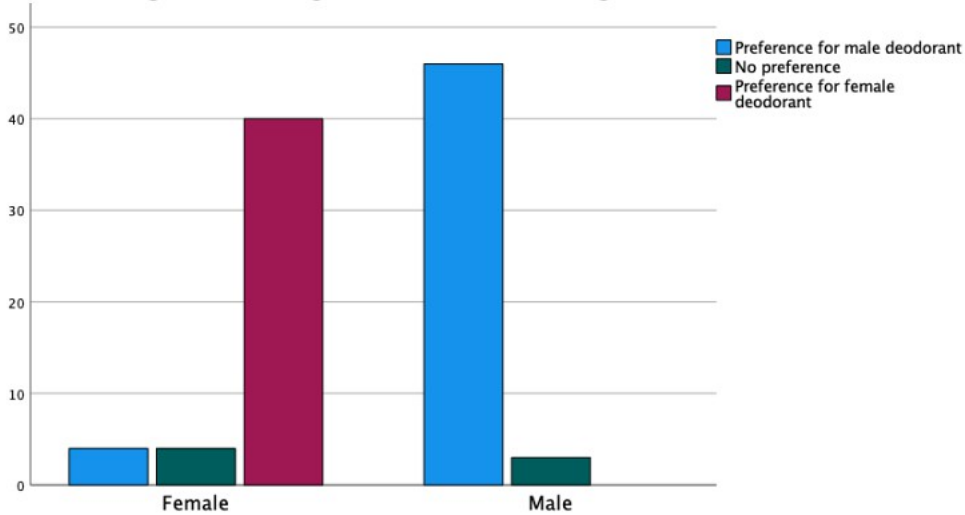
Figure 21: Neutral-gendered Deodorant vs. Male-gendered Deodorant

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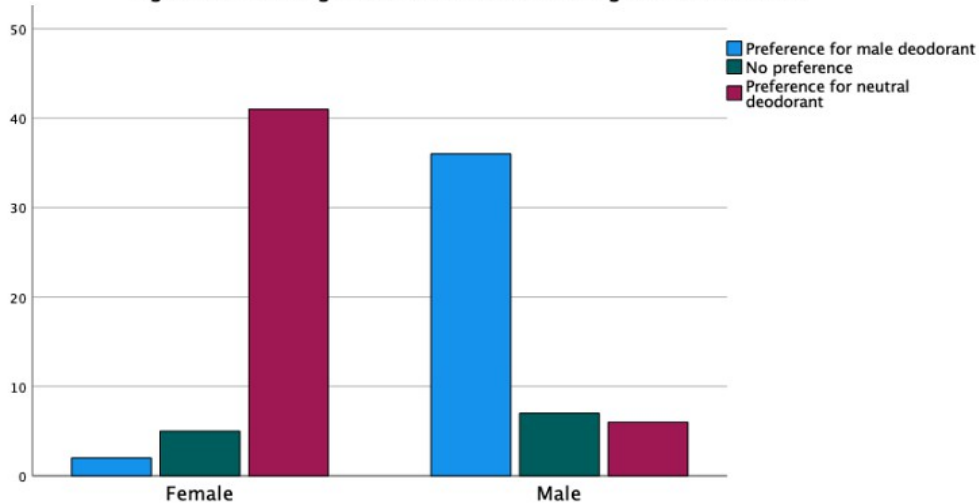
Based on the results presented above, the hypothesis presuming that female consumers have a preference for female gendered deodorant compared to neutral gendered deodorant is confirmed (H9). Findings support the statement that women prefer packaging relating to female gendered standards. The packaging of the two deodorants were essentially differentiated in colour and labelling. Female gendered deodorant presented pink female gendered colours and were labelled under "Women". In contrast, neutral gendered alternatives had grey colours and did not fall under any label. Overall, the descriptive statistics demonstrate that, in the case of deodorant, women were slightly more sensitive to female gendered colours and labelling. Yet, a significant portion of female respondents showed a preference for neutral gendered packaging. Women's disposition for purchasing neutral gendered deodorant might result from the fact that female gendered deodorant is usually not labelled. Similarly as for shampoo, neutral gendered deodorant is hardly differentiated from female gendered versions, and is not separated on the shelves in the supermarket.

Along the same lines, the hypothesis presuming that female consumers have a preference for female gendered deodorant compared to male gendered deodorant is also confirmed (H10). Findings suggest that women mainly opted for deodorant that met female gendered norms, in comparison with male gendered alternatives. These conclusions might result from the fact that deodorants are highly gendered products that mainly vary in scent. Deodorant perfume is often directly associated with gender, and can prevent a group that does not identify itself to that specific gender from purchasing. Moreover, male gendered packaging might have had a strong influence on women's preferences, as the deodorant had black and blue colours and presented male gendered labelling.

With regards to male respondents, the outcome leads to similar conclusions as for female respondents. Men had a preference for male gendered deodorant when compared with neutral or female gendered alternatives. However, men were found to be significantly more resistant to opting for female gendered deodorant. Similarly as in the case of razors, male participants totally rejected pink female gendered deodorant. Once again, the statement that the pink tax is justified based on women's high demand for female gendered products compared to men's demand for male gendered options can be contested. Truth be told, men appear to manifest a stronger preference for male gendered deodorant than women for female gendered versions.

5.3.2 Deodorant: Crossing Gender and Price Preferences

Regarding the analysis of the relation between gender and price preferences for deodorant, a first group of descriptive statistics was tabulated in consistency tables. The first section covered consistency tables of paired comparisons between more expensive neutral gendered deodorant and cheaper female and male gendered versions.

The descriptive statistics regarding price preferences for deodorant were first presented through a consistency table crossing gender and preferences between more expensive neutral gendered deodorant and cheaper female gendered options (see Appendix B: Table 130). Findings suggest that women had a general preference for cheaper female gendered deodorant. Results reveal that 39 female participants opted for less expensive female gendered products (81.3%), while 3 preferred pricier neutral gendered versions (6.3%). The remaining 6 female participants had no preference (12.5%). Conversely, men had a significant preference for pricier neutral gendered options. As a matter of fact, a majority of 36 male participants preferred more expensive neutral gendered deodorant (73.5%), whereas only 4 opted for cheaper female gendered alternatives instead (8.2%). The remaining 9 male participants had no preference for either option (18.4%).

Pearson's chi-squared test rejected the null hypothesis that gender and price preferences in matters of deodorant were unrelated, X^2 (2, n = 97) = 57.01, p < .001 (see Appendix B: Table 131). Overall, the bar chart illustrates that women significantly preferred cheaper female gendered deodorant, while men mainly opted for neutral gendered alternatives (see Figure 22).

Furthermore, the descriptive statistics crossing gender and preferences between more expensive neutral gendered deodorant and cheaper male gendered versions were presented in another consistency table (see Appendix B: Table 132). Overall, women had a preference for more expensive neutral gendered deodorant. The table shows that a majority of 28 female participants preferred pricier neutral gendered products (58.3%), while another 12 opted for cheaper male gendered options instead (25.0%). The last 8 female respondents had no preference (16.7%). Men, on the other hand, showed a clear preference for cheaper male gendered versions. Findings indicate that 46 male respondents preferred cheaper male gendered deodorant (93.9%), while only 2 opted for more expensive neutral gendered alternatives (4.1%). The remaining 1 male respondent did not indicate any preference between both options (2.0%).

The chi-squared further test rejected the null hypothesis that gender and price preferences for deodorant were unrelated, X^2 (2, n = 97) = 47.90, $p < .001$ (see Appendix B: Table 133). In accordance, the bar chart illustrates that men and women had different price preferences between more expensive neutral gendered deodorant and cheaper female gendered alternatives. As a matter of fact, women largely preferred less expensive female gendered products, while men rather opted for pricier neutral gendered versions (see Figure 23).

Figure 22: Neutral–gendered Deodorant More Expensive than Female–gendered Deodorant
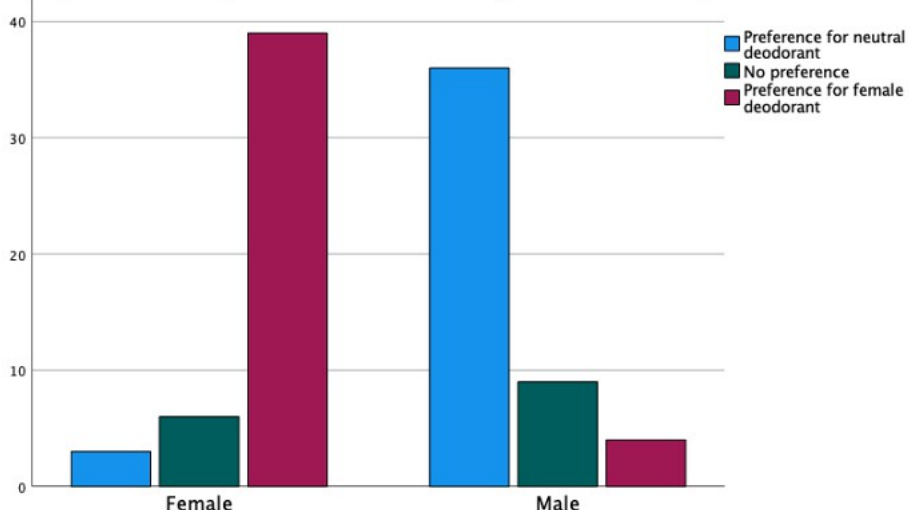
Figure 23: Neutral–gendered Deodorant More Expensive than Male–gendered Deodorant
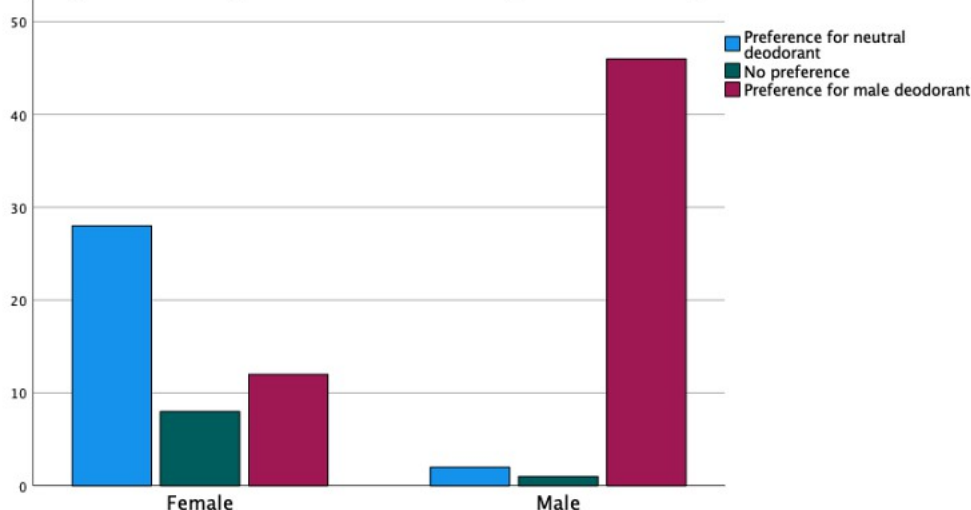
As a second step, descriptive statistics of the relation between gender and price preferences for deodorant were presented in consistency tables covering paired comparisons between cheaper neutral gendered deodorant and more expensive female and male gendered alternatives.

The first consistency table aimed at crossing gender and price preferences between cheaper neutral gendered deodorant and more expensive female gendered alternatives (see Appendix B: Table 134). Women mainly opted for less expensive neutral gendered products. As follows, 31 female respondents preferred less expensive neutral gendered deodorant (64.6%), while only 8 liked pricier female gendered versions better (16.7%). The remaining 9 female participants did not show any preference (18.8%). Similarly, almost all male respondents had a preference for less expensive neutral gendered deodorant. Results reveal that 48 male participants preferred cheaper neutral gendered versions (98.0%). The remaining 1 male respondent preferred pricier female gendered alternatives (2.0%).

Statistical significance was confirmed through a chi-squared test, rejecting the null hypothesis that gender and price preferences in matter of deodorant were unrelated, X^2 (2, n = 97) = 18.09, p < .001 (see Appendix B: Table 135). Even though both men and women showed a preference for less expensive neutral gendered deodorant, the bar chart illustrates that female respondents were much more disposed than male respondents to opt for pricier female gendered versions (see Figure 24).

Another consistency table covered descriptive statistics crossing gender and price preferences among cheaper neutral gendered deodorant and more expensive male gendered versions (see Appendix B: Table 136). Women were largely in favour of cheaper neutral gendered products. A significant number of 45 female respondents opted for less expensive neutral gendered deodorant (93.8%). Only 1 female subject had a preference for pricier male gendered versions (2.1%), while 2 had no preference (4.2%). In the same way, men preferred cheaper neutral gendered options. Results show that 26 male participants had a preference for cheaper neutral gendered deodorant (53.1%), whereas another 13 preferred more expensive male gendered products (26.5%), and a final group of 10 male respondents did not show any preference (20.4%).

Pearson's chi-squared test further rejected the null hypothesis that gender and price preferences for deodorant were unrelated, X^2 (2, n = 97) = 20.70, p < .001 (see Appendix B: Table 137). Although both men and women had a tendency for choosing cheaper neutral gendered deodorant over pricier options, the bar chart illustrates that men were more disposed than women to opt for more expensive male gendered alternatives (see Figure 25).

Figure 24: Neutral–gendered Deodorant Less Expensive than Female–gendered Deodorant

Figure 25: Neutral–gendered Deodorant Less Expensive than Male–gendered Deodorant
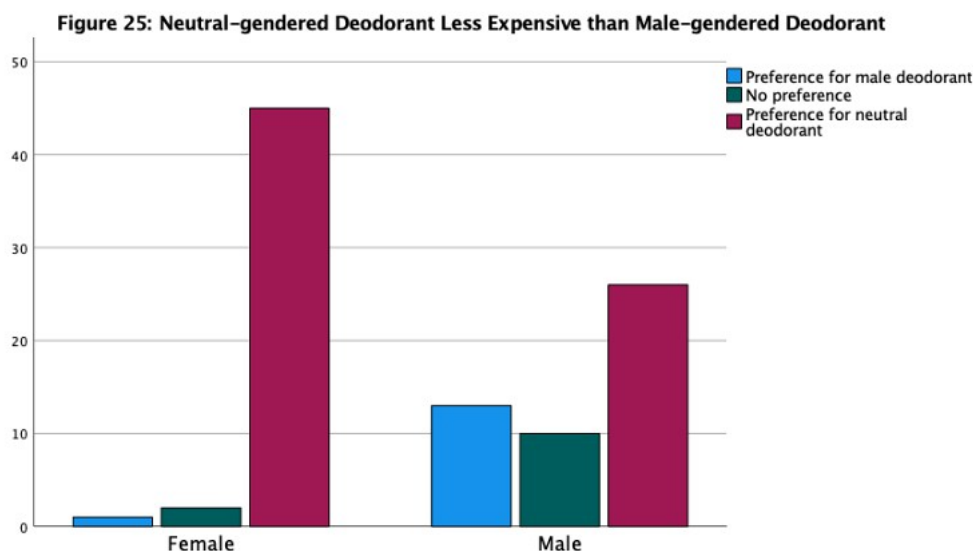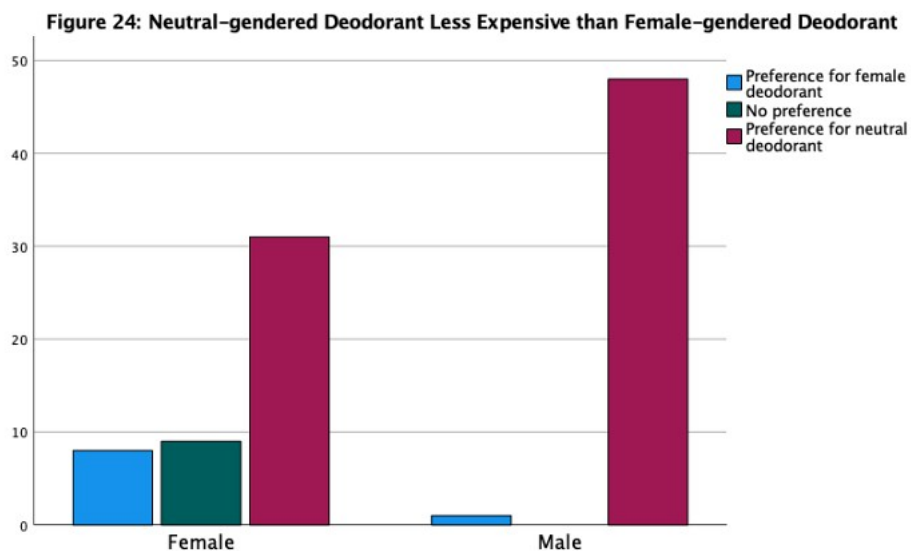
A final set of consistency tables was performed to analyse the relation between gender and price preferences for deodorant. Descriptive statistics were tabulated for pairs of female and male gendered deodorant varying in price.

The first consistency table revealed descriptive statistics crossing gender and preferences between more expensive female gendered deodorant and cheaper male gendered alternatives (see Appendix B: Table 138). Women were found to have a preference for more expensive female gendered products. Results show that a majority of 28 female respondents preferred pricier female gendered deodorant than male gendered versions (58.3%), which only 9 preferred (18.8%). The remaining group of 11 female participants did not show any preference between the two options (22.9%). Conversely, men had a significant preference for cheaper male gendered deodorant. As a matter of fact, 47 male participants opted for less expensive male gendered products (95.9%), while only 1 preferred more expensive female gendered alternatives (2.0%). The remaining 1 male participant selected the "No preference" option (2.0%).

A chi-squared test was further performed to test statistical significance (see Appendix B: Table 139). The p-value rejected the null hypothesis that gender and price preferences in the case of deodorant were unrelated, X^2 (2, n = 97) = 59.25, p < .001. The bar chart illustrates that women preferred more expensive female gendered deodorant, while men largely opted for cheaper male gendered options instead (see Figure 26).

The final consistency table presented the descriptive statistics of gender crossed with preferences between cheaper female gendered deodorant and more expensive male gendered options (see Appendix B: Table 140). Overall, findings suggest that women largely preferred less expensive female gendered deodorant. A significant number of 46 female respondents opted for cheaper female gendered deodorant (95.8%), while only 1 preferred more expensive male gendered deodorant instead (2.1%). Another 1 female participant selected the "No preference" option (2.1%). Men, however, were found to prefer more expensive male gendered deodorant. As a matter of fact, 40 male respondents indicated liking more expensive male gendered products better (81.6%), whereas only 4 preferred cheaper female gendered versions instead (8.2%). The remaining 5 male subjects had no preference for either option (10.2%).

Pearson's chi-squared test further rejected the null hypothesis that gender and price preferences were unrelated, X^2 (2, n = 97) = 75.04, p < .001 (see Appendix B: Table 141). The bar chart illustrates that women significantly preferred cheaper female gendered products, while men had a preference for more expensive male gendered deodorant instead (see Figure 27).

Figure 26: Female–gendered Deodorant More Expensive than Male–gendered Deodorant

Figure 27: Female–gendered Deodorant Less Expensive than Male–gendered Deodorant
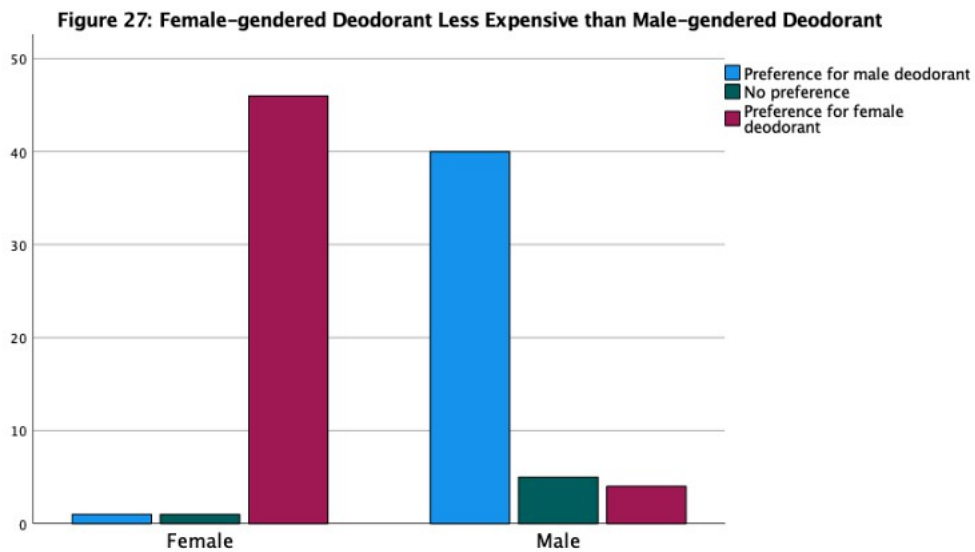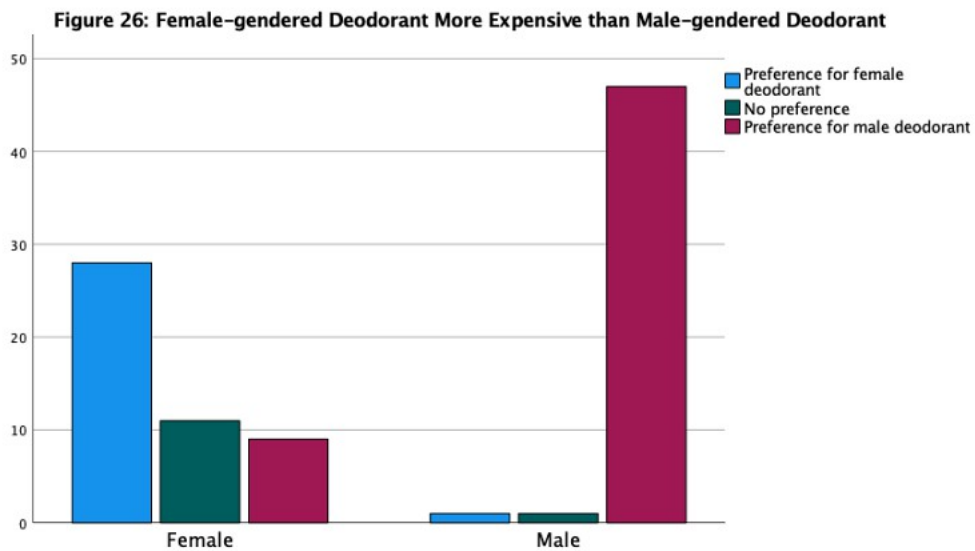
The results presented above reject the hypothesis that female consumers are willing to pay more for female gendered deodorant compared to cheaper neutral gendered deodorant (H11). In the case of deodorant, the overall outcome shows that women have a preference for less expensive neutral gendered deodorant when compared with pricier female gendered alternatives. Despite the fact that women overall prefer female gendered packaging for deodorant, the price variation proves that women are more sensitive to the price feature than the packaging feature.

Conversely, the hypothesis presuming that female consumers are willing to pay more for female gendered deodorant compared to cheaper male gendered deodorant is confirmed (H12). Overall, these findings demonstrate that women have a preference for more expensive female gendered deodorant when compared with cheaper male gendered alternatives. These conclusions are consistent with the expectations regarding women's preferences for packaging, as they are found to prefer female gendered deodorant over male gendered options. Findings reveal that women are more sensitive to packaging than price when female gendered deodorant is compared with male gendered alternatives.

Male consumer preferences were comparable to conclusions drawn for women. Results show that men were more sensitive to price when it came to paired comparisons for cheaper neutral gendered deodorant and more expensive male gendered options. As a matter of fact, men had a preference for less expensive neutral gendered deodorant instead of pricier male gendered products. Similarly, men became more sensitive to packaging when compared with female gendered deodorant. Overall, men showed a preference for more expensive neutral gendered deodorant compared to cheaper female gendered alternatives. The argument supposing that women have a higher willingness to pay for female gendered deodorant compared to male gendered versions can also be applied to men. Yet again, price discrimination on female gendered products is questioned. The observations derived from this study conclude that both men and women attribute a higher value to deodorant designed for their gender group, and are willing to pay more for these when compared with options fitting the other gender group.

CONCLUSION

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The basic issue that this paper seeks to address is whether the pink tax is just a marketing strategy or an example of gender discrimination. Based on an empirical approach, this research measures female and male consumer preferences for packaging and price to verify the conclusions of previous work which assumed that women attribute a higher value to female gendered products than men to identical male gendered options (Carpenter, Glazer, & Nakamoto, 1994; Mitchell & Walsh, 2004; Ferrell et al., 2018). The evidence from this research indicates that both female and male consumers attribute a higher value to packaging that responds to their gender norms, and that these preferences are not specific to female consumers, as previous studies claim (Ferrell et al., 2018). In contrast, the result of this paper supports previous speculations, which suggest that the pink tax price discrimination cannot be defined as a simple marketing strategy (Duesterhaus et al., 2011; Belleflamme, 2015; DCA, 2015; Dholakia, 2019).

This research focused on three personal care products which are frequently purchased by both men and women and present strong price variations between female and male gendered versions: razors, shampoo and deodorant. The study considered two features: packaging and price. With regard to packaging, these involved similar versions of neutral, female and male gendered products. For pricing, the study included four levels of price between a cheap and an expensive price. The survey was based on 294 respondents, equally divided by gender and spread over different categories of age, income, occupation and educational background.

The first conclusion emerging from this research stresses the importance of gendered packaging for both female and male consumers. Consistent with the expectations (Mitchell & Walsh, 2004; Silayoi & Speece, 2007; Duesterhaus et al., 2011; Agariya et al., 2012), this research confirms that women and men generally prefer packaging for personal care products that conform to gender normativity when compared with other alternatives. However, this paper shows that men have a stronger preference for male gendered personal care products than women for female gendered versions. These conclusions align with the experimental thought presented by Dholakia (2019), speculating that men might attribute a higher value to male gendered packaging than women to female gendered packaging.

In the case of razors, women were sensitive to female gendered colours and labelling, but were also disposed to buy neutral gendered alternatives. With a few exceptions, women also preferred female gendered razors compared to male gendered versions. Yet, none of the male respondents opted for female gendered razors when compared with male or neutral gendered alternatives.

Regarding shampoo, women had equal preferences for female and neutral gendered packaging. However, they became significantly more sensitive to labelling and colours when compared with male gendered shampoo. Men similarly had no significant preference between male and neutral gendered shampoo, but manifested a clear preference for packaging corresponding to male gendered norms when compared with female gendered options. Colours and labelling were found to only have an impact when presented in pairs of female and male gendered shampoo.

With regard to deodorant, women preferred female to neutral gendered packaging, although a significant portion opted for neutral gendered options. With a few exceptions, female consumers also preferred female to male gendered deodorant. Likewise, men preferred male gendered deodorant when compared with neutral or female gendered versions. Without exception, men rejected the female gendered deodorant option.

This study provides further evidence regarding the price element of personal care products. Conclusions do not sustain the theory that the pink tax price is a result of price discrimination based on women's willingness to pay more for female gendered products.

At different price levels of razors, women preferred cheaper neutral gendered razors instead of more expensive female gendered ones, suggesting that they were more sensitive to price than packaging. Women also preferred cheaper male gendered razors when compared with more expensive female gendered options. Men, however, were significantly more sensitive to packaging and were prepared to pay a higher price for male gendered razors when compared with cheaper female gendered versions. While men and women differed in the value they attributed to gendered packaging, price discrimination in the form of a pink tax for female gendered razors is unjustified, considering that men have a higher disposition to pay a premium price for male gendered razors than women for female gendered options. Considering the fact that disposable razors are considerably more expensive in reality (DCA, 2015), this pink tax can be seen as a form of gender discrimination.

In the case of shampoo, women had a preference for less expensive neutral gendered shampoo when compared with pricier female gendered alternatives. However, they were willing to pay more for female gendered shampoo compared to cheaper male gendered versions. This indicates that women were more sensitive to packaging than price. Men also were more sensitive to price when comparing male gendered shampoo with cheaper neutral gendered options. Similarly to women, men were more sensitive to packaging than price when compared with female gendered versions: male respondents preferred opting for more expensive neutral and male gendered shampoo and were very reluctant to opt for female gendered ones. The assumption that women had a higher willingness to pay for female gendered shampoo when compared with male gendered alternatives also holds for men, who demonstrate a higher willingness to pay for male gendered shampoo. The existence of price discrimination on female gendered products is once again unjustified, considering that both men and women attribute a higher value to shampoo that meets their gender norms.

The outcome for deodorant similarly shows that women, despite their preference for female gendered packaging, were more sensitive to price than packaging when compared to neutral gendered alternatives. However, women had a preference for more expensive female gendered deodorant when compared with cheaper male gendered alternatives. Likewise, male respondents were more sensitive to price when neutral gendered deodorants were compared to more expensive male gendered options but became more sensitive to packaging when compared with female gendered deodorant. Again, the outcome shows that both men and women attribute a higher value to deodorant designed for their gender group and are willing to pay more. A price discrimination on female gendered products is not supported by the evidence.

With regard to the products in this study, the assumption that women have a higher willingness to pay for female gendered products when compared with male gendered alternatives equally holds for men. The study also highlights the importance of non-gendered packaging options with no labelling and neutral gendered colours for the price discriminating consumers, whether female, male or non-binary. Considering that for some products, such as razors, these are rarely on display, neutral gendered packaging could be more frequently offered as an option to consumers.

Rather than a sound marketing strategy, the evidence suggests that the pink tax theory is based on unfounded assumptions of price discrimination and female preferences and could instead be considered as a form of gender discrimination. The premium price that women pay on personal care products, in contrast, does raise the ethical question of why women should pay more than men for products and services that are essentially the same or very similar. This is even more compelling considering that price variations between female and male gendered products are considerable and that they concern products of daily use. Over time, the financial impact on women is significantly higher ("The Woman Tax", 2012; DCA, 2015; Gillioz, 2019; Zaugg & Emery, 2019). Should these results be validated by further studies, the considerable price variation now commonly found for female gendered products could result in a consumer's backslash. Considering that most countries explicitly prohibit discrimination based on gender, additional evidence of the existence of such unfounded discriminatory practices could lead to possible legislative measures. Even countries like Switzerland which so far resisted taking such steps could eventually follow the very recent example set by the state of New York prohibiting any kind of price discrimination on gendered products (New York State, 2020).

LIMITATIONS AND FUTURE RESEARCH

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A number of potential limitations of this paper need to be considered. First, the small sample size must be taken into account. With a limit of 50 female and 50 male participants for each personal care product, this research was only able to reflect a tendency of preferences rather than confirmed purchasing behaviour. To verify the present results, future research can be applied to a larger population. Moreover, consumer preferences were based on an indirect approach presenting options in pairs. This might have led to biased responses, because in the store, female and male gendered products are mainly presented on separate shelves. Women might be tempted to only compare products and prices between female gendered options, while men might be inclined to only compare prices among male gendered products. It could be interesting to conduct future research based on a direct approach and ask a large sample of consumers to purchase razors, shampoo or deodorant in a store to analyse the value that consumers attribute to gender-based packaging and price preferences (Miller, Hofstetter, Krohmer, & Zhang, 2011).

More broadly research is also required to determine the importance of gendered packaging for personal care products that only vary in colour and labelling, such as the disposable razors selected for this study. This paper presumes that preferences for shampoo and deodorant might be influenced by perceived differences of smell associated with gender. It could be interesting for future research to solely analyse the impact of the gendered packaging feature itself on consumers, excluding possible smell associations. Furthermore, many neutral gendered personal care products such as razors are rarely commercialised and it could be relevant to run a trial test to confirm results of this paper indicating that female and male consumers are disposed to actually purchase cheaper neutral gendered personal care products.

Another important limitation of this study derives from the applied methodology. Cross-tabulation enabled drawing tendencies and highlighting relations between gender and packaging and price preferences in most of the cases, but it did not help to extract which features of each product the sample of female and male participants both preferred. On a wider level, future research is required to estimate which packaging feature and which price level were preferred by each gender segment. The design of the survey in paired comparisons is also in conformity for the application of a choice-based conjoint analysis.

Future studies by other researches could make use of the data collected for this paper to apply a choice-based conjoint analysis in order to precisely measure feature preferences regarding packaging and price for each consumer segment (Green & Srinivasan, 1990; Breidert, Hahsler, & Reutterer, 2006). An interesting and unanswered issue, however, needs to be taken into account in any further research, namely the ingrained integration of the pink tax in female consumption habits. This paper has raised many questions in need of further investigation regarding the chicken and egg paradox of the pink tax. The price discrimination arising from the pink tax is well established and deeply integrated in female consumption habits. This makes it difficult to draw real price preferences for female consumers, as women are used to purchasing more expensive personal care products and might not even be aware of the financial implications deriving from this price discrimination.

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APPENDIX A: COMMON FACTOR ANALYSIS

Table 8: Item Statistics Neutral Razors Equal Price to Female Razors

	Mean	Std. Deviation	N
RAZN1F1	,35	,907	99
RAZN2F2	,37	,899	99
RAZN3F3	,36	,897	99
RAZN4F4	,30	,897	99

Table 9: Reliability Statistics Neutral Razors Equal Price to Female Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,953	,953	4

Table 10: Inter-Item Correlation Matrix Neutral Razors Equal Price to Female Razors

	RAZN1F1	RAZN2F2	RAZN3F3	RAZN4F4
RAZN1F1	1,000	,838	,781	,832
RAZN2F2	,838	1,000	,893	,858
RAZN3F3	,781	,893	1,000	,812
RAZN4F4	,832	,858	,812	1,000

Table 11: Item Statistics Neutral Razors Less Expensive than Female Razors

	Mean	Std. Deviation	N
RAZN1F2	,55	,812	99
RAZN1F3	,75	,644	99
RAZN1F4	,78	,615	99
RAZN2F3	,70	,706	99
RAZN2F4	,78	,615	99
RAZN3F4	,62	,765	99

Table 12: Reliability Statistics Neutral Razors Less Expensive than Female Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,889	,894	6

Table 13: Inter–Item Correlation Matrix Neutral Razors Less Expensive than Female Razors

	RAZN1F2	RAZN1F3	RAZN1F4	RAZN2F3	RAZN2F4	RAZN3F4
RAZN1F2	1,000	,461	,531	,576	,409	,521
RAZN1F3	,461	1,000	,629	,570	,706	,567
RAZN1F4	,531	,629	1,000	,595	,650	,705
RAZN2F3	,576	,570	,595	1,000	,501	,707
RAZN2F4	,409	,706	,650	,501	1,000	,640
RAZN3F4	,521	,567	,705	,707	,640	1,000

Table 14: Item Statistics Female Razors More Expensive than Male Razors

	Mean	Std. Deviation	N
RAZF4M3	,51	,850	99
RAZF4M2	,58	,797	99
RAZF4M1	,69	,723	99
RAZF3M2	,41	,892	99
RAZF3M1	,56	,823	99
RAZF2M1	,32	,946	99

Table 15: Reliability Statistics Female Razors More Expensive than Male Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,939	,941	6

Table 16: Inter–Item Correlation Matrix Female Razors More Expensive than Male Razors

	RAZF4M3	RAZF4M2	RAZF4M1	RAZF3M2	RAZF3M1	RAZF2M1
RAZF4M3	1,000	,621	,758	,717	,747	,734
RAZF4M2	,621	1,000	,776	,752	,799	,604
RAZF4M1	,758	,776	1,000	,677	,740	,597
RAZF3M2	,717	,752	,677	1,000	,795	,819
RAZF3M1	,747	,799	,740	,795	1,000	,750
RAZF2M1	,734	,604	,597	,819	,750	1,000

Table 17: Item Statistics Female Razors Equal Price to Male Razors

	Mean	Std. Deviation	N
RAZF1M1	–,19	,955	99
RAZF2M2	–,19	,944	99
RAZF3M3	–,21	,951	99
RAZF4M4	–,19	,955	99

Table 18: Reliability Statistics Female Razors Equal Price to Male Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,963	,963	4

Table 19: Inter-Item Correlation Matrix Female Razors Equal Price to Male Razors

	RAZF1M1	RAZF2M2	RAZF3M3	RAZF4M4
RAZF1M1	1,000	,853	,798	,821
RAZF2M2	,853	1,000	,909	,887
RAZF3M3	,798	,909	1,000	,933
RAZF4M4	,821	,887	,933	1,000

Table 20: Item Statistics Female Razors Less Expensive than Male Razors

	Mean	Std. Deviation	N
RAZF1M2	-,02	,990	99
RAZF1M3	-,01	,985	99
RAZF1M4	,22	,943	99
RAZF2M3	,03	,984	99
RAZF2M4	,22	,943	99
RAZF3M4	,03	,974	99

Table 21: Reliability Statistics Female Razors Less Expensive than Male Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,960	,960	6

Table 22: Inter-Item Correlation Matrix Female Razors Less Expensive than Male Razors

	RAZF1M2	RAZF1M3	RAZF1M4	RAZF2M3	RAZF2M4	RAZF3M4
RAZF1M2	1,000	,764	,749	,881	,803	,742
RAZF1M3	,764	1,000	,750	,832	,750	,777
RAZF1M4	,749	,750	1,000	,807	,874	,804
RAZF2M3	,881	,832	,807	1,000	,829	,862
RAZF2M4	,803	,750	,874	,829	1,000	,782
RAZF3M4	,742	,777	,804	,862	,782	1,000

Table 23: Item Statistics Neutral Razors More Expensive than Male Razors

	Mean	Std. Deviation	N
RAZN2M1	,39	,901	99
RAZN3M1	,54	,825	99
RAZN3M2	,43	,871	99
RAZN4M1	,62	,779	99
RAZN4M2	,61	,780	99
RAZN4M3	,46	,849	99

Table 24: Reliability Statistics Neutral Razors More Expensive than Male Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,925	,925	6

Table 25: Inter-Item Correlation Matrix Neutral Razors More Expensive than Male Razors

	RAZN2M1	RAZN3M1	RAZN3M2	RAZN4M1	RAZN4M2	RAZN4M3
RAZN2M1	1,000	,633	,833	,625	,644	,732
RAZN3M1	,633	1,000	,724	,705	,775	,589
RAZN3M2	,833	,724	1,000	,610	,690	,690
RAZN4M1	,625	,705	,610	1,000	,656	,520
RAZN4M2	,644	,775	,690	,656	1,000	,664
RAZN4M3	,732	,589	,690	,520	,664	1,000

Table 26: Item Statistics Neutral Razors Equal Price to Male Razors

	Mean	Std. Deviation	N
RAZN1M1	-,01	,942	99
RAZN2M2	,01	,953	99
RAZN3M3	,04	,947	99
RAZN4M4	-,02	,947	99

Table 27: Reliability Statistics Neutral Razors Equal Price to Male Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,951	,951	4

Table 28: Inter–Item Correlation Matrix Neutral Razors Equal Price to Male Razors

	RAZN1M1	RAZN2M2	RAZN3M3	RAZN4M4
RAZN1M1	1,000	,807	,801	,777
RAZN2M2	,807	1,000	,904	,837
RAZN3M3	,801	,904	1,000	,843
RAZN4M4	,777	,837	,843	1,000

Table 29: Item Statistics Neutral Razors Less Expensive than Male Razors

	Mean	Std. Deviation	N
RAZN1M2	,21	,961	99
RAZN1M3	,56	,823	99
RAZN1M4	,64	,762	99
RAZN2M3	,39	,913	99
RAZN2M4	,54	,837	99
RAZN3M4	,31	,922	99

Table 30: Reliability Statistics Neutral Razors Less Expensive than Male Razors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,914	,916	6

Table 31: Inter–Item Correlation Matrix Neutral Razors Less Expensive than Male Razors

	RAZN1M2	RAZN1M3	RAZN1M4	RAZN2M3	RAZN2M4	RAZN3M4
RAZN1M2	1,000	,584	,552	,695	,504	,834
RAZN1M3	,584	1,000	,683	,683	,675	,562
RAZN1M4	,552	,683	1,000	,692	,788	,570
RAZN2M3	,695	,683	,692	1,000	,603	,713
RAZN2M4	,504	,675	,788	,603	1,000	,534
RAZN3M4	,834	,562	,570	,713	,534	1,000

Table 36: Item Statistics Neutral Shampoo Equal Price to Female Shampoo

	Mean	Std. Deviation	N
SHMN1F1	,32	,892	98
SHMN2F2	,27	,914	98
SHMN3F3	,23	,917	98
SHMN4F4	,32	,904	98

Table 37: Reliability Statistics Neutral Shampoo Equal Price to Female Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,924	,924	4

Table 38: Inter-Item Correlation Matrix Neutral Shampoo Equal Price to Female Shampoo

	SHMN1F1	SHMN2F2	SHMN3F3	SHMN4F4
SHMN1F1	1,000	,743	,816	,783
SHMN2F2	,743	1,000	,712	,746
SHMN3F3	,816	,712	1,000	,718
SHMN4F4	,783	,746	,718	1,000

Table 39: Item Statistics Neutral Shampoo Less Expensive than Female Shampoo

	Mean	Std. Deviation	N
SHMN1F2	,55	,814	98
SHMN1F3	,68	,726	98
SHMN1F4	,66	,745	98
SHMN2F3	,72	,685	98
SHMN2F4	,73	,682	98
SHMN3F4	,72	,685	98

Table 40: Reliability Statistics Neutral Shampoo Less Expensive than Female Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,885	,888	6

Table 41: Inter-Item Correlation Matrix Neutral Shampoo Less Expensive than Female Shampoo

	SHMN1F2	SHMN1F3	SHMN1F4	SHMN2F3	SHMN2F4	SHMN3F4
SHMN1F2	1,000	,525	,462	,700	,489	,367
SHMN1F3	,525	1,000	,487	,651	,578	,672
SHMN1F4	,462	,487	1,000	,583	,553	,624
SHMN2F3	,700	,651	,583	1,000	,680	,627
SHMN2F4	,489	,578	,553	,680	1,000	,548
SHMN3F4	,367	,672	,624	,627	,548	1,000

Table 42: Item Statistics Female Shampoo More Expensive than Male Shampoo

	Mean	Std. Deviation	N
SHMF4M3	,16	,981	98
SHMF4M2	,33	,928	98
SHMF4M1	,32	,926	98
SHMF3M2	,13	,981	98
SHMF3M1	,15	,988	98
SHMF2M1	,04	,994	98

Table 43: Reliability Statistics Female Shampoo More Expensive than Male Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,956	,957	6

Table 44: Inter–Item Correlation Matrix Female Shampoo More Expensive than Male Shampoo

	SHMF4M3	SHMF4M2	SHMF4M1	SHMF3M2	SHMF3M1	SHMF2M1
SHMF4M3	1,000	,779	,748	,781	,857	,818
SHMF4M2	,779	1,000	,922	,813	,766	,756
SHMF4M1	,748	,922	1,000	,737	,690	,725
SHMF3M2	,781	,813	,737	1,000	,766	,851
SHMF3M1	,857	,766	,690	,766	1,000	,781
SHMF2M1	,818	,756	,725	,851	,781	1,000

Table 45: Item Statistics Female Shampoo Equal Price to Male Shampoo

	Mean	Std. Deviation	N
SHMF1M1	,00	,984	98
SHMF2M2	,00	,995	98
SHMF3M3	,01	,979	98
SHMF4M4	,02	,974	98

Table 46: Reliability Statistics Female Shampoo Equal Price to Male Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,963	,963	4

Table 47: Inter–Item Correlation Matrix Female Shampoo Equal Price to Male Shampoo

	SHMF1M1	SHMF2M2	SHMF3M3	SHMF4M4
SHMF1M1	1,000	,863	,834	,893
SHMF2M2	,863	1,000	,836	,873
SHMF3M3	,834	,836	1,000	,897
SHMF4M4	,893	,873	,897	1,000

Table 48: Item Statistics Female Shampoo Less Expensive than Male Shampoo

	Mean	Std. Deviation	N
SHMF1M2	,16	,981	98
SHMF1M3	,18	,978	98
SHMF1M4	,34	,919	98
SHMF2M3	,22	,969	98
SHMF2M4	,27	,948	98
SHMF3M4	,20	,963	98

Table 49: Reliability Statistics Female Shampoo Less Expensive than Male Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,967	,967	6

Table 50: Inter–Item Correlation Matrix Female Shampoo Less Expensive than Male Shampoo

	SHMF1M2	SHMF1M3	SHMF1M4	SHMF2M3	SHMF2M4	SHMF3M4
SHMF1M2	1,000	,839	,750	,807	,773	,837
SHMF1M3	,839	1,000	,757	,816	,782	,825
SHMF1M4	,750	,757	1,000	,899	,879	,877
SHMF2M3	,807	,816	,899	1,000	,878	,879
SHMF2M4	,773	,782	,879	,878	1,000	,855
SHMF3M4	,837	,825	,877	,879	,855	1,000

Table 51: Item Statistics Neutral Shampoo More Expensive than Male Shampoo

	Mean	Std. Deviation	N
SHMN2M1	-,11	,983	98
SHMN3M1	-,05	,999	98
SHMN3M2	,03	1,000	98
SHMN4M1	,04	,994	98
SHMN4M2	,19	,960	98
SHMN4M3	,01	,990	98

Table 52: Reliability Statistics Neutral Shampoo More Expensive than Male Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,932	,932	6

Table 53: Inter–Item Correlation Matrix Neutral Shampoo More Expensive than Male Shampoo

	SHMN2M1	SHMN3M1	SHMN3M2	SHMN4M1	SHMN4M2	SHMN4M3
SHMN2M1	1,000	,740	,706	,585	,592	,732
SHMN3M1	,740	1,000	,714	,719	,710	,720
SHMN3M2	,706	,714	1,000	,715	,606	,781
SHMN4M1	,585	,719	,715	1,000	,770	,702
SHMN4M2	,592	,710	,606	,770	1,000	,660
SHMN4M3	,732	,720	,781	,702	,660	1,000

Table 54: Item Statistics Neutral Shampoo Equal Price to Male Shampoo

	Mean	Std. Deviation	N
SHMN1M1	,42	,861	98
SHMN2M2	,41	,860	98
SHMN3M3	,40	,858	98
SHMN4M4	,35	,875	98

Table 55: Reliability Statistics Neutral Shampoo Equal Price to Male Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,917	,917	4

Table 56: Inter–Item Correlation Matrix Neutral Shampoo Equal Price to Male Shampoo

	SHMN1M1	SHMN2M2	SHMN3M3	SHMN4M4
SHMN1M1	1,000	,714	,596	,668
SHMN2M2	,714	1,000	,756	,783
SHMN3M3	,596	,756	1,000	,885
SHMN4M4	,668	,783	,885	1,000

Table 57: Item Statistics Neutral Shampoo Less Expensive than Male Shampoo

	Mean	Std. Deviation	N
SHMN1M2	,72	,670	98
SHMN1M3	,71	,703	98
SHMN1M4	,79	,613	98
SHMN2M3	,71	,689	98
SHMN2M4	,82	,563	98
SHMN3M4	,72	,685	98

Table 58: Reliability Statistics Neutral Shampoo Less Expensive than Male Shampoo

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,890	,890	6

Table 59: Inter-Item Correlation Matrix Neutral Shampoo Less Expensive than Male Shampoo

	SHMN1M2	SHMN1M3	SHMN1M4	SHMN2M3	SHMN2M4	SHMN3M4
SHMN1M2	1,000	,487	,682	,565	,466	,664
SHMN1M3	,487	1,000	,478	,681	,439	,648
SHMN1M4	,682	,478	1,000	,659	,632	,569
SHMN2M3	,565	,681	,659	1,000	,635	,596
SHMN2M4	,466	,439	,632	,635	1,000	,429
SHMN3M4	,664	,648	,569	,596	,429	1,000

Table 64: Item Statistics Neutral Deodorant Equal Price to Female Deodorant

	Mean	Std. Deviation	N
DEON1F1	,30	,926	97
DEON2F2	,38	,895	97
DEON3F3	,32	,919	97
DEON4F4	,40	,862	97

Table 65: Reliability Statistics Neutral Deodorant Equal Price to Female Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,927	,927	4

Table 66: Inter–Item Correlation Matrix Neutral Deodorant Equal Price to Female Deodorant

	DEON1F1	DEON2F2	DEON3F3	DEON4F4
DEON1F1	1,000	,866	,670	,761
DEON2F2	,866	1,000	,800	,744
DEON3F3	,670	,800	1,000	,717
DEON4F4	,761	,744	,717	1,000

Table 67: Item Statistics Neutral Deodorant Less Expensive than Female Deodorant

	Mean	Std. Deviation	N
DEON1F2	,62	,783	97
DEON1F3	,74	,650	97
DEON1F4	,81	,583	97
DEON2F3	,57	,828	97
DEON2F4	,79	,611	97
DEON3F4	,80	,589	97

Table 68: Reliability Statistics Neutral Deodorant Less Expensive than Female Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,924	,932	6

Table 69: Inter–Item Correlation Matrix Neutral Deodorant Less Expensive than Female Deodorant

	DEON1F2	DEON1F3	DEON1F4	DEON2F3	DEON2F4	DEON3F4
DEON1F2	1,000	,746	,664	,739	,617	,650
DEON1F3	,746	1,000	,587	,681	,546	,574
DEON1F4	,664	,587	1,000	,608	,943	,985
DEON2F3	,739	,681	,608	1,000	,563	,593
DEON2F4	,617	,546	,943	,563	1,000	,929
DEON3F4	,650	,574	,985	,593	,929	1,000

Table 70: Item Statistics Female Deodorant More Expensive than Male Deodorant

	Mean	Std. Deviation	N
DEOF4M3	,30	,937	97
DEOF4M2	,36	,926	97
DEOF4M1	,38	,929	97
DEOF3M2	,20	,986	97
DEOF3M1	,30	,959	97
DEOF2M1	,19	,982	97

Table 71: Reliability Statistics Female Deodorant More Expensive than Male Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,967	,967	6

Table 72: Inter–Item Correlation Matrix Female Deodorant More Expensive than Male Deodorant

	DEOF4M3	DEOF4M2	DEOF4M1	DEOF3M2	DEOF3M1	DEOF2M1
DEOF4M3	1,000	,810	,765	,849	,884	,822
DEOF4M2	,810	1,000	,795	,846	,850	,818
DEOF4M1	,765	,795	1,000	,725	,864	,789
DEOF3M2	,849	,846	,725	1,000	,852	,930
DEOF3M1	,884	,850	,864	,852	1,000	,869
DEOF2M1	,822	,818	,789	,930	,869	1,000

Table 73: Item Statistics Female Deodorant Equal Price to Male Deodorant

	Mean	Std. Deviation	N
DEOF1M1	−,12	,992	97
DEOF2M2	−,08	,986	97
DEOF3M3	−,10	,973	97
DEOF4M4	−,08	,965	97

Table 74: Reliability Statistics Female Deodorant Equal Price to Male Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,984	,985	4

Table 75: Inter–Item Correlation Matrix Female Deodorant Equal Price to Male Deodorant

	DEOF1M1	DEOF2M2	DEOF3M3	DEOF4M4
DEOF1M1	1,000	,926	,957	,925
DEOF2M2	,926	1,000	,935	,945
DEOF3M3	,957	,935	1,000	,956
DEOF4M4	,925	,945	,956	1,000

Table 76: Item Statistics Female Deodorant Less Expensive than Male Deodorant

	Mean	Std. Deviation	N
DEOF1M2	,07	1,003	97
DEOF1M3	,04	,989	97
DEOF1M4	,20	,964	97
DEOF2M3	,01	,995	97
DEOF2M4	,13	,975	97
DEOF3M4	,10	,995	97

Table 77: Reliability Statistics Female Deodorant Less Expensive than Male Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,981	,981	6

Table 78: Inter–Item Correlation Matrix Female Deodorant Less Expensive than Male Deodorant

	DEOF1M2	DEOF1M3	DEOF1M4	DEOF2M3	DEOF2M4	DEOF3M4
DEOF1M2	1,000	,880	,858	,950	,938	,933
DEOF1M3	,880	1,000	,844	,879	,924	,896
DEOF1M4	,858	,844	1,000	,812	,913	,880
DEOF2M3	,950	,879	,812	1,000	,901	,883
DEOF2M4	,938	,924	,913	,901	1,000	,963
DEOF3M4	,933	,896	,880	,883	,963	1,000

Table 79: Item Statistics Neutral Deodorant More Expensive than Male Deodorant

	Mean	Std. Deviation	N
DEON2M1	,24	,966	97
DEON3M1	,28	,955	97
DEON3M2	,09	,980	97
DEON4M1	,42	,899	97
DEON4M2	,35	,925	97
DEON4M3	,36	,915	97

Table 80: Reliability Statistics Neutral Deodorant More Expensive than Male Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,967	,967	6

Table 81: Inter–Item Correlation Matrix Neutral Deodorant More Expensive than Male Deodorant

	DEON2M1	DEON3M1	DEON3M2	DEON4M1	DEON4M2	DEON4M3
DEON2M1	1,000	,865	,857	,795	,897	,881
DEON3M1	,865	1,000	,774	,784	,844	,874
DEON3M2	,857	,774	1,000	,688	,757	,752
DEON4M1	,795	,784	,688	1,000	,847	,901
DEON4M2	,897	,844	,757	,847	1,000	,932
DEON4M3	,881	,874	,752	,901	,932	1,000

Table 82: Item Statistics Neutral Deodorant Equal Price to Male Deodorant

	Mean	Std. Deviation	N
DEON1M1	,09	,969	97
DEON2M2	,04	,978	97
DEON3M3	,13	,964	97
DEON4M4	,08	,954	97

Table 83: Reliability Statistics Neutral Deodorant Equal Price to Male Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,981	,981	4

Table 84: Inter–Item Correlation Matrix Neutral Deodorant Equal Price to Male Deodorant

	DEON1M1	DEON2M2	DEON3M3	DEON4M4
DEON1M1	1,000	,952	,901	,983
DEON2M2	,952	1,000	,878	,957
DEON3M3	,901	,878	1,000	,894
DEON4M4	,983	,957	,894	1,000

Table 85: Item Statistics Neutral Deodorant Less Expensive than Male Deodorant

	Mean	Std. Deviation	N
DEON1M2	,52	,843	97
DEON1M3	,53	,843	97
DEON1M4	,63	,768	97
DEON2M3	,47	,867	97
DEON2M4	,54	,817	97
DEON3M4	,61	,771	97

Table 86: Reliability Statistics Neutral Deodorant Less Expensive than Male Deodorant

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,939	,940	6

Table 87: Inter-Item Correlation Matrix Neutral Deodorant Less Expensive than Male Deodorant

	DEON1M2	DEON1M3	DEON1M4	DEON2M3	DEON2M4	DEON3M4
DEON1M2	1,000	,787	,765	,816	,472	,794
DEON1M3	,787	1,000	,803	,781	,660	,817
DEON1M4	,765	,803	1,000	,721	,602	,877
DEON2M3	,816	,781	,721	1,000	,564	,810
DEON2M4	,472	,660	,602	,564	1,000	,584
DEON3M4	,794	,817	,877	,810	,584	1,000

APPENDIX B: CROSS-TABULATIONS AND CHI-SQUARE TESTS

Table 90: Crosstabulation Gender * Female-gendered Razors vs. Male-gendered Razors

			Male Razor	No preference	Female Razor	Total
Gender	Other	Count	1	1	1	3
		%	33,3%	33,3%	33,3%	100,0%
	Female	Count	7	9	32	48
		%	14,6%	18,8%	66,7%	100,0%
	Male	Count	42	6	0	48
		%	87,5%	12,5%	0,0%	100,0%
Total		Count	50	16	33	99
		%	50,5%	16,2%	33,3%	100,0%

Table 91: Chi-Square Tests Female vs. Male Razor Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	58,591[a]	4	,000
Likelihood Ratio	73,342	4	,000
Linear-by-Linear Association	47,060	1	,000
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,48.

Table 92: Crosstabulation Gender * Neutral-gendered Razors vs. Male-gendered Razors

			Male Razor	No preference	Neutral Razor	Total
Gender	Other	Count	2	1	0	3
		%	66,7%	33,3%	0,0%	100,0%
	Female	Count	7	13	28	48
		%	14,6%	27,1%	58,3%	100,0%
	Male	Count	29	10	9	48
		%	60,4%	20,8%	18,8%	100,0%
Total		Count	38	24	37	99
		%	38,4%	24,2%	37,4%	100,0%

Table 93: Chi-Square Tests Neutral vs. Male Razor Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	25,490[a]	4	,000
Likelihood Ratio	27,973	4	,000
Linear-by-Linear Association	13,171	1	,000
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,73.

Table 94: Crosstabulation Gender * Neutral-gendered Razors More Expensive than Female-gendered Razors

			Neutral More Expensive than Female			
			Neutral Razor	No preference	Female Razor	Total
Gender	Other	Count	1	1	1	3
		%	33,3%	33,3%	33,3%	100,0%
	Female	Count	7	7	34	48
		%	14,6%	14,6%	70,8%	100,0%
	Male	Count	31	14	3	48
		%	64,6%	29,2%	6,3%	100,0%
Total		Count	39	22	38	99
		%	39,4%	22,2%	38,4%	100,0%

Table 95: Chi-Square Tests Neutral-gendered Razors More Expensive than Female-gendered Razors

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	43,829[a]	4	,000
Likelihood Ratio	49,422	4	,000
Linear-by-Linear Association	31,619	1	,000
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,67.

Table 96: Crosstabulation Gender * Neutral-gendered Razors More Expensive than Male-gendered Razors

			Neutral More Expensive than Male			
			Neutral Razor	No preference	Male Razor	Total
Gender	Other	Count	0	0	3	3
		%	0,0%	0,0%	100,0%	100,0%
	Female	Count	12	12	24	48
		%	25,0%	25,0%	50,0%	100,0%
	Male	Count	3	6	39	48
		%	6,3%	12,5%	81,3%	100,0%
Total		Count	15	18	66	99
		%	15,2%	18,2%	66,7%	100,0%

Table 97: Chi-Square Tests Neutral-gendered Razors More Expensive than Male-gendered Razors

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12,694[a]	4	,013
Likelihood Ratio	13,907	4	,008
Linear-by-Linear Association	5,651	1	,017
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,45.

Table 98: Crosstabulation Gender * Neutral-gendered Razors Less Expensive than Female-gendered Razors

			Neutral Less Expensive than Female			
			Female Razor	No preference	Neutral Razor	Total
Gender	Other	Count	1	1	1	3
		%	33,3%	33,3%	33,3%	100,0%
	Female	Count	6	12	30	48
		%	12,5%	25,0%	62,5%	100,0%
	Male	Count	0	5	43	48
		%	0,0%	10,4%	89,6%	100,0%
Total		Count	7	18	74	99
		%	7,1%	18,2%	74,7%	100,0%

Table 99: Chi-Square Tests Neutral-gendered Razors Less Expensive than Female-gendered Razors

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14,584[a]	4	,006
Likelihood Ratio	16,442	4	,002
Linear-by-Linear Association	14,162	1	,000
N of Valid Cases	99		

a. 5 cells (55,6%) have expected count less than 5. The minimum expected count is ,21.

Table 100: Crosstabulation Gender * Neutral-gendered Razors Less Expensive than Male-gendered Razors

			Neutral Less Expensive than Male			
			Male Razor	No preference	Neutral Razor	Total
Gender	Other	Count	2	1	0	3
		%	66,7%	33,3%	0,0%	100,0%
	Female	Count	3	8	37	48
		%	6,3%	16,7%	77,1%	100,0%
	Male	Count	11	15	22	48
		%	22,9%	31,3%	45,8%	100,0%
Total		Count	16	24	59	99
		%	16,2%	24,2%	59,6%	100,0%

Table 101: Chi-Square Tests Neutral-gendered Razors Less Expensive than Male-gendered Razors

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16,995[a]	4	,002
Likelihood Ratio	17,397	4	,002
Linear-by-Linear Association	2,440	1	,118
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,48.

Table 102: Crosstabulation Gender * Female-gendered Razors More Expensive than Male-gendered Razors

			Female More Expensive than Male			
			Female Razor	No preference	Male Razor	Total
Gender	Other	Count	0	1	2	3
		%	0,0%	33,3%	66,7%	100,0%
	Female	Count	15	13	20	48
		%	31,3%	27,1%	41,7%	100,0%
	Male	Count	0	2	46	48
		%	0,0%	4,2%	95,8%	100,0%
Total		Count	15	16	68	99
		%	15,2%	16,2%	68,7%	100,0%

Table 103: Chi-Square Tests Female-gendered Razors More Expensive than Male-gendered Razors

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	34,554[a]	4	,000
Likelihood Ratio	41,694	4	,000
Linear-by-Linear Association	23,280	1	,000
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,45.

Table 104: Crosstabulation Gender * Female-gendered Razors Less Expensive than Male-gendered Razors

			Female Less Expensive than Male			
			Male Razor	No preference	Female Razor	Total
Gender	Other	Count	1	1	1	3
		%	33,3%	33,3%	33,3%	100,0%
	Female	Count	2	4	42	48
		%	4,2%	8,3%	87,5%	100,0%
	Male	Count	33	11	4	48
		%	68,8%	22,9%	8,3%	100,0%
Total		Count	36	16	47	99
		%	36,4%	16,2%	47,5%	100,0%

Table 105: Chi-Square Tests Female-gendered Razors Less Expensive than Male-gendered Razors

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	63,073[a]	4	,000
Likelihood Ratio	73,762	4	,000
Linear-by-Linear Association	45,353	1	,000
N of Valid Cases	99		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,48.

Table 108: Crosstabulation Gender * Female-gendered Shampoo vs. Male-gendered Shampoo

			Packaging			
			Male Shampoo	No preference	Female Shampoo	Total
Gender	Other	Count	1	0	0	1
		%	100,0%	0,0%	0,0%	100,0%
	Female	Count	3	5	41	49
		%	6,1%	10,2%	83,7%	100,0%
	Male	Count	36	10	2	48
		%	75,0%	20,8%	4,2%	100,0%
Total		Count	40	15	43	98
		%	40,8%	15,3%	43,9%	100,0%

Table 109: Chi-Square Tests Female vs. Male Shampoo Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	66,370[a]	4	,000
Likelihood Ratio	79,841	4	,000
Linear-by-Linear Association	52,444	1	,000
N of Valid Cases	98		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,15.

Table 110: Crosstabulation Gender * Neutral-gendered Shampoo vs. Male- gendered Shampoo

			Packaging			
			Male Shampoo	No preference	Neutral Shampoo	Total
Gender	Other	Count	0	0	1	1
		%	0,0%	0,0%	100,0%	100,0%
	Female	Count	2	8	39	49
		%	4,1%	16,3%	79,6%	100,0%
	Male	Count	15	19	14	48
		%	31,3%	39,6%	29,2%	100,0%
Total		Count	17	27	54	98
		%	17,3%	27,6%	55,1%	100,0%

Table 111: Chi-Square Tests Neutral vs. Male Shampoo Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	27,090[a]	4	,000
Likelihood Ratio	29,330	4	,000
Linear-by-Linear Association	25,061	1	,000
N of Valid Cases	98		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,17.

Table 112: Crosstabulation Gender * Neutral-gendered Shampoo More Expensive than Female-gendered Shampoo

			Neutral More Expensive than Female			
			Neutral Shampoo	No preference	Female Shampoo	Total
Gender	Other	Count	1	0	0	1
		%	100,0%	0,0%	0,0%	100,0%
	Female	Count	9	5	35	49
		%	18,4%	10,2%	71,4%	100,0%
	Male	Count	26	11	11	48
		%	54,2%	22,9%	22,9%	100,0%
Total		Count	36	16	46	98
		%	36,7%	16,3%	46,9%	100,0%

Table 113: Chi-Square Tests Neutral Shampoo More Expensive than Female Shampoo

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24,757[a]	4	,000
Likelihood Ratio	26,096	4	,000
Linear-by-Linear Association	15,994	1	,000
N of Valid Cases	98		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,16.

Table 114: Crosstabulation Gender * Neutral-gendered Shampoo More Expensive than Male-gendered Shampoo

			Neutral More Expensive than Male			
			Neutral Shampoo	No preference	Male Shampoo	Total
Gender	Other	Count	1	0	0	1
		%	100,0%	0,0%	0,0%	100,0%
	Female	Count	32	7	10	49
		%	65,3%	14,3%	20,4%	100,0%
	Male	Count	5	13	30	48
		%	10,4%	27,1%	62,5%	100,0%
Total		Count	38	20	40	98
		%	38,8%	20,4%	40,8%	100,0%

Table 115: Chi-Square Tests Neutral Shampoo More Expensive than Male Shampoo

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	32,906[a]	4	,000
Likelihood Ratio	36,180	4	,000
Linear-by-Linear Association	29,487	1	,000
N of Valid Cases	98		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,20.

Table 116: Crosstabulation Gender * Neutral-gendered Shampoo Less Expensive than Female-gendered Shampoo

			Neutral Less Expensive than Female			
			Female Shampoo	No preference	Neutral Shampoo	Total
Gender	Other	Count	0	0	1	1
		%	0,0%	0,0%	100,0%	100,0%
	Female	Count	8	12	29	49
		%	16,3%	24,5%	59,2%	100,0%
	Male	Count	0	3	45	48
		%	0,0%	6,3%	93,8%	100,0%
Total		Count	8	15	75	98
		%	8,2%	15,3%	76,5%	100,0%

Table 117: Chi-Square Tests Neutral Shampoo Less Expensive than Female Shampoo

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17,283[a]	4	,002
Likelihood Ratio	20,887	4	,000
Linear-by-Linear Association	13,881	1	,000
N of Valid Cases	98		

a. 5 cells (55,6%) have expected count less than 5. The minimum expected count is ,08.

Table 118: Crosstabulation Gender * Neutral-gendered Shampoo Less Expensive than Male-gendered Shampoo

			Neutral Less Expensive than Male			
			Male Shampoo	No preference	Neutral Shampoo	Total
Gender	Other	Count	0	0	1	1
		%	0,0%	0,0%	100,0%	100,0%
	Female	Count	1	3	45	49
		%	2,0%	6,1%	91,8%	100,0%
	Male	Count	5	9	34	48
		%	10,4%	18,8%	70,8%	100,0%
Total		Count	6	12	80	98
		%	6,1%	12,2%	81,6%	100,0%

Table 119: Chi-Square Tests Neutral Shampoo Less Expensive than Male Shampoo

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	7,474[a]	4	,113
Likelihood Ratio	7,985	4	,092
Linear-by-Linear Association	6,827	1	,009
N of Valid Cases	98		

a. 5 cells (55,6%) have expected count less than 5. The minimum expected count is ,06.

Table 120: Crosstabulation Gender * Female-gendered Shampoo More Expensive than Male-gendered Shampoo

			Female More Expensive than Male			
			Female Shampoo	No preference	Male Shampoo	Total
Gender	Other	Count	0	0	1	1
		%	0,0%	0,0%	100,0%	100,0%
	Female	Count	30	11	8	49
		%	61,2%	22,4%	16,3%	100,0%
	Male	Count	0	8	40	48
		%	0,0%	16,7%	83,3%	100,0%
Total		Count	30	19	49	98
		%	30,6%	19,4%	50,0%	100,0%

Table 121: Chi-Square Tests Female Shampoo More Expensive than Male Shampoo

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	52,893[a]	4	,000
Likelihood Ratio	66,739	4	,000
Linear-by-Linear Association	43,480	1	,000
N of Valid Cases	98		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,19.

Table 122: Crosstabulation Gender * Female-gendered Shampoo Less Expensive than Male-gendered Shampoo

			Female Less Expensive than Male			
			Male Shampoo	No preference	Female Shampoo	Total
Gender	Other	Count	1	0	0	1
		%	100,0%	0,0%	0,0%	100,0%
	Female	Count	3	2	44	49
		%	6,1%	4,1%	89,8%	100,0%
	Male	Count	28	11	9	48
		%	58,3%	22,9%	18,8%	100,0%
Total		Count	32	13	53	98
		%	32,7%	13,3%	54,1%	100,0%

Table 123: Chi-Square Tests Female Shampoo Less Expensive than Male Shampoo

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	51,441[a]	4	,000
Likelihood Ratio	57,553	4	,000
Linear-by-Linear Association	35,886	1	,000
N of Valid Cases	98		

a. 3 cells (33,3%) have expected count less than 5. The minimum expected count is ,13.

Table 126: Crosstabulation Gender * Female-gendered Deodorant vs. Male-gendered Deodorant

			Packaging			
			Male Deodorant	No preference	Female Deodorant	Total
Gender	Female	Count	4	4	40	48
		%	8,3%	8,3%	83,3%	100,0%
	Male	Count	46	3	0	49
		%	93,9%	6,1%	0,0%	100,0%
Total		Count	50	7	40	97
		%	51,5%	7,2%	41,2%	100,0%

Table 127: Chi-Square Tests Female vs. Male Deodorant Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	75,421[a]	2	,000
Likelihood Ratio	97,023	2	,000
Linear-by-Linear Association	74,618	1	,000
N of Valid Cases	97		

a. 2 cells (33,3%) have expected count less than 5. The minimum expected count is 3,46.

Table 128: Crosstabulation Gender * Neutral-gendered Deodorant vs. Male-gendered Deodorant

			Packaging			
			Male Deodorant	No preference	Neutral Deodorant	Total
Gender	Female	Count	2	5	41	48
		%	4,2%	10,4%	85,4%	100,0%
	Male	Count	36	7	6	49
		%	73,5%	14,3%	12,2%	100,0%
Total		Count	38	12	47	97
		%	39,2%	12,4%	48,5%	100,0%

Table 129: Chi-Square Tests Neutral vs. Male Deodorant Packaging

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	56,814[a]	2	,000
Likelihood Ratio	66,589	2	,000
Linear-by-Linear Association	56,141	1	,000
N of Valid Cases	97		

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,94.

Table 130: Crosstabulation Gender * Neutral-gendered Deodorant More Expensive than Female-gendered Deodorant

			Neutral More Expensive than Female			
			Neutral Deodorant	No preference	Female Deodorant	Total
Gender	Female	Count	3	6	39	48
		%	6,3%	12,5%	81,3%	100,0%
	Male	Count	36	9	4	49
		%	73,5%	18,4%	8,2%	100,0%
Total		Count	39	15	43	97
		%	40,2%	15,5%	44,3%	100,0%

Table 131: Chi-Square Tests Neutral Deodorant More Expensive than Female Deodorant

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	57,007[a]	2	,000
Likelihood Ratio	66,502	2	,000
Linear-by-Linear Association	55,995	1	,000
N of Valid Cases	97		

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 7,42.

Table 132: Crosstabulation Gender * Neutral-gendered Deodorant More Expensive than Male-gendered Deodorant

			Neutral More Expensive than Male			
			Neutral Deodorant	No preference	Male Deodorant	Total
Gender	Female	Count	28	8	12	48
		%	58,3%	16,7%	25,0%	100,0%
	Male	Count	2	1	46	49
		%	4,1%	2,0%	93,9%	100,0%
Total		Count	30	9	58	97
		%	30,9%	9,3%	59,8%	100,0%

Table 133: Chi-Square Tests Neutral Deodorant More Expensive than Male Deodorant

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	47,904[a]	2	,000
Likelihood Ratio	54,347	2	,000
Linear-by-Linear Association	44,159	1	,000
N of Valid Cases	97		

a. 2 cells (33,3%) have expected count less than 5. The minimum expected count is 4,45.

Table 134: Crosstabulation Gender * Neutral-gendered Deodorant Less Expensive than Female-gendered Deodorant

			Neutral Less Expensive than Female			
			Female Deodorant	No preference	Neutral Deodorant	Total
Gender	Female	Count	8	9	31	48
		%	16,7%	18,8%	64,6%	100,0%
	Male	Count	1	0	48	49
		%	2,0%	0,0%	98,0%	100,0%
Total		Count	9	9	79	97
		%	9,3%	9,3%	81,4%	100,0%

Table 135: Chi-Square Tests Neutral Deodorant Less Expensive than Female Deodorant

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18,094[a]	2	,000
Likelihood Ratio	22,351	2	,000
Linear-by-Linear Association	14,309	1	,000
N of Valid Cases	97		

a. 4 cells (66,7%) have expected count less than 5. The minimum expected count is 4,45.

Table 136: Crosstabulation Gender * Neutral-gendered Deodorant Less Expensive than Male-gendered Deodorant

			Neutral Less Expensive than Male			
			Male Deodorant	No preference	Neutral Deodorant	Total
Gender	Female	Count	1	2	45	48
		%	2,1%	4,2%	93,8%	100,0%
	Male	Count	13	10	26	49
		%	26,5%	20,4%	53,1%	100,0%
Total		Count	14	12	71	97
		%	14,4%	12,4%	73,2%	100,0%

**Table 137: Chi-Square Tests Neutral Deodorant Less
Expensive than Male Deodorant**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	20,695[a]	2	,000
Likelihood Ratio	23,162	2	,000
Linear-by-Linear Association	19,175	1	,000
N of Valid Cases	97		

a. 0 cells (0,0%) have expected count less than 5. The
minimum expected count is 5,94.

**Table 138: Crosstabulation Gender * Female-gendered Deodorant More
Expensive than Male-gendered Deodorant**

			Female More Expensive than Male			
			Female Deodorant	No preference	Male Deodorant	Total
Gender	Female	Count	28	11	9	48
		%	58,3%	22,9%	18,8%	100,0%
	Male	Count	1	1	47	49
		%	2,0%	2,0%	95,9%	100,0%
Total		Count	29	12	56	97
		%	29,9%	12,4%	57,7%	100,0%

**Table 139: Chi-Square Tests Female Deodorant More
Expensive than Male Deodorant**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	59,253[a]	2	,000
Likelihood Ratio	69,501	2	,000
Linear-by-Linear Association	53,509	1	,000
N of Valid Cases	97		

a. 0 cells (0,0%) have expected count less than 5. The
minimum expected count is 5,94.

**Table 140: Crosstabulation Gender * Female-gendered Deodorant Less Expensive
than Male-gendered Deodorant**

			Female Less Expensive than Male			
			Male Deodorant	No preference	Female Deodorant	Total
Gender	Female	Count	1	1	46	48
		%	2,1%	2,1%	95,8%	100,0%
	Male	Count	40	5	4	49
		%	81,6%	10,2%	8,2%	100,0%
Total		Count	41	6	50	97
		%	42,3%	6,2%	51,5%	100,0%

Table 141: Chi–Square Tests Female Deodorant Less Expensive than Male Deodorant

	Value	df	Asymptotic Significance (2–sided)
Pearson Chi–Square	75,042[a]	2	,000
Likelihood Ratio	91,774	2	,000
Linear–by–Linear Association	72,189	1	,000
N of Valid Cases	97		

a. 2 cells (33,3%) have expected count less than 5. The minimum expected count is 2,97.

DECLARATION

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UNI FR ■

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D E C L A R A T I O N

I hereby declare that I wrote this thesis on my own and followed the principles of scientific integrity.

I acknowledge that otherwise the department has, according to a decision of the Faculty Council of November 11th, 2004, the right to withdraw the title that I was conferred based on this thesis.

I confirm that this work or parts thereof have not been submitted in this form elsewhere for an examination, according to a decision of the Faculty Council of November 18th, 2013.

Fribourg
.............................., the ....26th of April.......... 20...21.....

(Signature)

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